

STIC Search Report Biotech-Chem Library

STIC Database Tracking Number: 181755

TO: Celine Qian

Location: rem/2A64/2C70

Art Unit: 1636

<u>Μακή (φ</u>, 2006

Case Serial Number: 09/515363

From: P. Sheppard

Location: Remsen Building

Phone: (571) 272-2529

sheppard@uspto.gov

Search Notes	

This Page Blank (Uspho)

FOR OFFICIAL USE ONLY

ACCESS DE # 18/155
PLEASE PRINT CLEARLY

Scientific and Technical Information Center
CREE SEARCH REQUEST FORM
Requester's Full Name: Coline Qian Examiner #: 78710 Date: 3/8706 Art Unit: 1636 Phone Number: 2- 0777 Serial Number: 09/5/5363 Location (Bldg/Room#): 2464 (Mailbox #): 2c70 Résults Format Preferred (circle): PAPER DISK ***********************************
To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:
Title of Invention: Melanoma Diff. Assoc. Gene, Promoter & uses thereof Inventors (please provide full names): Fish, Paul et al.
Inventors (please provide full names): Fish, Paul et al.
Earliest Priority Date: 2/29/2000
Search Topic: Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invertion. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.
For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.
Plene seanh SEQ IDNO:1
MEj and a nucleir acid envoding SEQ IDNO: 2
Please seant above sequences in both commencial
database l'interference detabase.
1 Ma 3365
12 aa 1025

Point of Contact
P. Sheppard

This Page Blank (Uspto)

```
Title:
Perfect (
                                                                                                                                                                                                                                                                                                                                                                                                                                Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum I
Maximum I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                      3365
3365
3361.8
3361.8
3361.8
3361.8
3381.8
3338.8
3338.8
1766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BB BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    score:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenEmbl:*

1: gb ba:*

2: gb in:*

3: gb env:*

4: gb om:*

9: gb pat:*

9: gb pat:*

9: gb pr:*
                        100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
100.0
                                                                                                                                                                                                                                                                                                                                                                                                                              Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-515-363C-1
3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 March 13, 2006, 18:20:20; Search time 16315 Seconds (without alignments)
11724.071 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5883141 seqs, 28421725653 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gcgcgccggcctgagagccc.....aaaatgattgttttactctg 3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gb_pr:*
gb_ro:*
gb_sts:*
gb_sy:*
gb_un:*
gb_vi:*
gb_htg:*
gb_pl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                        3434
3434
3434
3434
3372
3372
3377
2540
37771
37771
37771
17776
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.7
(c) 1993 - 2006 Biocceleration
                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
        CQ776470
CS113027
CS113027
AF095844
CS033863
CS035676
CS042815
CS045628
AX300832
AY017378
BC0778180
CQ777379
AF374384
AY075132
BC080200
AX7114144
AK056293
CQ7729104
                                                                                                                                                                                                                                                                                                                                                                                                                                ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11766282
CQ776470 Sequence
CS108225 Sequence
CS113027 Sequence
AF095844 Homo sapi
CS033863 Sequence
CS036676 Sequence
CS042815 Sequence
CS042815 Sequence
AX300832 Sequence
AY017378 Homo sapi
BC078180 Homo sapi
CQ777379 Sequence
AF374384 Mus muscu
AY075132 Mus muscu
AX714144 Sequence
AX016293 Homo sapi
CQ729104 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ltd.
```

	00000	0000	
044444 004848 10488	30 30 30 30 30 30 30 30 30 30 30 40 30 40 30 40 40 40 40 40 40 40 40 40 40 40 40 40	27 28 30 31 32	19 21 22 23 25
376.4 371.2 375.8 371.3 365.8 356.8	455.2 455.2	797 663 663 507.2 507.2	1435.6 1402 1278.8 1254.6 1193.4 1186 803 803
11.4 11.2 11.0 10.9 10.6	13.55.1	23.7 19.7 19.7 18.5 15.1 15.1	442.7 441.7 38.0 37.3 35.5 23.9
3458 392 392 374 387 3458	4499 4999 4999 4999	1630 3692 3704 95417 595 595	1443 2468 1392 1284 1204 2050 1258 1270
υσσσσω	ითთთთ	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	00000000
BC019605 BC019355 BD269355 AX071769 BD071774 AX071783 BC073528	CQ335189 CQ113866 CQ152744 CQ273644 CQ273644 CQ347943	BC046208 AX098234 AX098238 AC010876 CQ100724 CQ139716 CQ261044	AX300841 BC025508 AR379503 AX300838 BC007966 BC004031 AX098232 AX098236
,			
BC019605 Mus muscu BD269355 Gene show AX071769 Sequence BD071774 Secreted AX071783 Sequence BC073528 Xenopus 1		BC046208 Homo sapi AX098234 Sequence AX098238 Sequence AC010876 Homo sapi CQ100724 Sequence CQ139716 Sequence CQ261044 Sequence	
	ត់ ត់ ត់ ត់ ត់ ត	ជី្មំ មុំ ជី្មម មុ	

ALIGNMENTS

Query Match Best Local Si Matches 3365; Qy 1 G Db 1 G Oy 61 C	RESULT 1 CQ776470 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE JOURNAL FEATURES SOURCE ORIGIN
Query Match 100.0%; Score 3365; DB 6; Length 3380; Best Local Similarity 100.0%; Pred. No. 0; Best Local Similarity 100.0%; Pred. No. 0; Matches 3365; Conservative 0; Mismatches 0; Indels 0; Gaps 0; 1 GCGCGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC 60	CQ776470 Sequence 156 from Patent EP1394274. CQ776470 CQ776470.1 GI:45379860 Homo sapiens (human) Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo. 1 Ohtani,N., Sugita,Y., Yamaya,M., Kubo,H., Nagai,H. and Izuhara,K. Methods of testing for bronchial asthma or chronic obstructive pulmonary disease Patent: EP 1394274-A 156 03-MAR-2004; Genox Research, Inc. (JP) Location/Qualifiers 1. 3380 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"

2
191 TATTCCACAGACCHANTTCCCCTATCTCCTCTCTCACCCCCACCAGATANATG 240 241 TATCCACCAGACCAGATATTTCCCCTTCCCCCCTTCCTCCCCCCCC
5
1221 PARCETRATIONACIONETTICOCOCAGNATIONATION INTERNATION TECCHNOTIVE INTERNATIONATION INTERNATIONATION INTERNATIONATION INTERNATIONATIONATIONATIONATIONATIONATIONATIO

Ş

밁

```
RESULT 2
CS108225
                                                                                                                                                                                                                                                                                                                                                                                       2941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2701
                                                                                                               3301
                                                                                                                                    3241
                                                                                                                                                                                 3181
                                                                                                                                                                                                                                                  3121
                                                                                                                                                                                                                                                                        3061
                                                                                                                                                                                                                                                                                              3061
                                                                                                                                                                                                                                                                                                                    100E
                                                                                                                                                                                                                                                                                                                                            3001
                                                                                                                                                                                                                                                                                                                                                                 2941
                                                                                                                                                                                                                                                                                                                                                                                                              2881
                                                                                                                                                                                                                                                                                                                                                                                                                                    2881
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2521
                                                                                       3301
                                                                                                                                                          3241
                                                                                                                                   AAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCATCACTAATAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAAATCAAT
                                                                                                                                                                                                                                                                         GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGAAGTAGGAGTCAAAGCCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA
                                                                                                      TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA
                                                                                                                                                                                  AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATACAAAAAGTGGGTA
                                                                                                                                                                                                                                         AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATACAAAAAAGTGGGTA
                                                                                                                                                                                                                                                                                                                     AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGT
                                                                                                                                                                                                                                                                                                                                 AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGT
                                                                                                                                                                                                                                                                                                                                                               AAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATTGTAAGAGAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                             TTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAAATGAAAAATTT
                                                                    CTCTG
                                             3365
                                                                  3365
                                                                                                                                                                                                                                                                                                                                                                                                               GCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAATTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2400
                                                                                                              3360
                                                                                                                                                           3300
                                                                                                                                                                                                                                                   3180
                                                                                                                                                                                                                                                                                               3120
                                                                                                                                                                                                                                                                                                                                                                  3000
                                                                                                                                                                                                                                                                                                                                                                                         3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                           2880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2460
                                                                                         3360
                                                                                                                                                                                  3240
                                                                                                                                                                                                       3240
                                                                                                                                                                                                                              3180
                                                                                                                                                                                                                                                                         3120
                                                                                                                                                                                                                                                                                                                      3060
                                                                                                                                                                                                                                                                                                                                             3060
                                                                                                                                                                                                                                                                                                                                                                                                               2940
                                                                                                                                                                                                                                                                                                                                                                                                                                    2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                  Ş
                                                                                                              В
                                                                                                                                  S
                                                                                                                                                                           Ś
                                                                                                                                                                                                      g
                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                          Ś
                                                                   뭕
                                                                                                                                                          뮍
                                                                                                                                                                                                                                                    吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                              181
                        601
                                            601
                                                                   541
                                                                                         541
                                                                                                               481
                                                                                                                                     481
                                                                                                                                                           421
                                                                                                                                                                                  421
                                                                                                                                                                                                        361
                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
```

Ş

밁

Ś

몽 5 멍

당

5

Ş

멍

5

망

밁 S В

dd

Ś

멍 5 멍 S В ঠ

S 8 Ş 당 S 망 S 밁 Ş

```
멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 3365; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Abbas, A., ...

Abbas, A., ...

Wood, W.I. and ...

Compositions and me.

erythematosis

Patent: WO 2005051988-A 23s

Genentech, Inc. (US)

Location/Qualifiers

1. .3380

"rganism="Homo sapi"
"pe="unassign"
"axon: 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CS108225
Sequence 233
CS108225
CS108225.1 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata;
Mammalia; Eutheria; Euarchontoglires; Pu
Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                      TACATCCA
                                                                                                                   CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCACT 540
                                                                                                                                                                                                                                                                                                                                                                      TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ccreci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCGCGCCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGC
                                                                     CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGI
                                                                                                                                                                                                                                                                                     TACATCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTCTGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                       CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACC'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAACCGGCAGCCCTCTGGCCGCCGCTACATGAACCCCTGAGCTCA
                                                                                                                                                                                                                                                                      AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAACTGGTTCTCTG
                                     ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAA
                                                                                                                                                                                  AGAACCGGCAGCCCTCTGGCCGCCGCCTACATGAACCCTGAGCTCA
                                                                                                                                                                                                                       ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCG
                                                                                                                                                                                                                                      ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:68147706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clark, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 3365;
Pred. No. 0;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3380 bp DNA
WO2005051988.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-JUN-2005;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Schoenfeld, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vertebrat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 3380;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ϋ́В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACAGAGCGGTAGAC 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ta; Euteleostomi;
Catarrhini;
                                                                                                                                                                                                                                                                                                                       CAGAGGTGAAGGAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTCCCGCAGACAA 120
 CATTTCTGAATGTT 720
                                                                                                                                                                                                                        regaecccrccee
                                                                                                                                                                                                                                      TGGAGGCCCTCCGG 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stemic lupus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lliams, P.M.,
                                                                                                                                                                                                                                                                                      VACTGCTGCTGAGC 360
                                                                                                                                                                                                                                                                                                                                                                        GATGTCGAATGGG 180
                                                                                                                                                                                                                                                                         ACTGCTGCTGAGC 360
                                                                                                                                                                                                                                                                                                                                       CAGAGGTGAAGGAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATGTCGAATGGG 180
                                               TGAATCAGGTGTA 660
                                                                       GGAGGAACTGTTG
                                                                                    GGAGGAACTGTTG 600
                                                                                                                                                                        GGACTTGCCCTCT
                                                                                                                                                                                   GGACTTGCCCTCT 480
                                                                                                                                                                                                                                                                                                                                                                                         CAGGGTGAAAATG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT 22-JUN-2005
                                                                                                                                                                        480
                                                                                                                                                                                                                        420
                         660
                                                                        600
```

δ	B 8	8 8 9	g 89	dd Qy	용 성	g V	ρ δ	8 8	유상	B 8	D 09	99 V9	A 4	유 성	B 8	B &	B 8	DЬ
1741 CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 1800	1 CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAGAAAAC 17	CGAAGCAAGCCAAAGCTGAAGAA 1 	1 AAGTTGAAAAACAATAGACTCAAGAAAGAAAACAAACCAGTGATTCCCCTTCCT(01 TGTCATCACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAG 1 	GAA	1 AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCCCTCTTAAACTTG 1	21 TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATTTCCAGAAGTTGTC 13	1261 AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAAATGG 1320 	1 GATCACTTAGACAAGAAGAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAAT 	μ μ	1 GAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	1021 GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAAGAGCATCCCCGGAGCCA 1080 	1 GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATGGGCAGTGATTCA 	TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAGAA 	841 CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGGCATGGAGAATAACTCA 900 	AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTT	CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAA	
	D CY	D 4	Q B Q	Db Qy	Db	g dg Qy	Db Q	S & &) Db (9) b Q	Db QQ) b 6) D (4	סם פע	S & &	Db 49	S & &	bb
2821 AAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCATCACTAATAACT 2000 2821 AAAATGAAAACCAAGGAAAATATTGCCAAGCATTACAAGAATAACCCATCACTAATAACT 2880	761 ANACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG 282	701 ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG 276	641 GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATC	581 ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA 2	ATATTAAAGAATG ATATTAAAGAATG	461 CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATCAAT 25	401 GCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA 246 401 GCTGAAGTAGGAGTCAAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA 246	341 ACAAAAACACGACAGAGIGCATAIGCGCITTCCCAGIGGATACIGGAAAAAITI 240 341 ACAAAAACACGACAGAGIGCATAIGCGCTTTCCCAGIGGATACTGAAAAAITI 240 341 ACAAAAACACGACAGAGIGCATAIGCGCTTTCCCAGIGGATTACTGAAAATTT 240	281 AGAMATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTT 234 281 AGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTT 234 281 AGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTT 234	221 ARANTGTTGARANGGCTGGCTGARANCCCAGARTATGARANTGARANGCTGACCAGARTA 228	161 ANACCITIGAMACIGATIGAMACAGATAGATITCICATGACITATITITIGAAAACAAT 222 161 ANACCITTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAAACAAT 222	101 AGIGAIGAGGGIGGIGAIGAIGAGGATATTGTGATGATGATGAAGATGAGGATGATTTAAAG 216 101 AGTGATGAGGGTGGTGATGAGTATTGTGATGATGATGAAGATGAGGATGAT	041 CATCITGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGAT 210	961 AGGARGIACANI GAGGECETACANAI TANIGACACANTI COMIGNIGATION GAGGEGATACT 204 981 AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATACT 204	721 HIGHAMMUNINGCIGCAMANANGGAMATICGCAMAGAACGTGTTTGTGCAGAACATTTG 198 921 ATGGAMAAAAAAAGCTGCAAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG 198	B61 TGTCABATGAGTCCABTGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA 192	801 ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAAGATTCAAACTTAT 18 801 ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAAGATTCAAACTTAT 18 801 ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTAT 18	741 CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 180

D Y Be Ba	JOURNAL Patent: WO 2005054507-A 45 16-JUN-2005; University of Sheffield (GB) FEATURES SOURCE 13380 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"	Homo Homo Eukar Mamma Homin 1	RESULT 3 CS113027 LOCUS CS113027 DEFINITION Sequence 45 from Patent WO2005054507. ACCESSION CS113027 VERSION CS113027.1 GI:68224599	Qy 3361 CTCTG 3365 Db 3361 CTCTG 3365	QY 3301 TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA 3360	Qy 3241 GATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTA 3300	Qy 3181 GAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTATTTA	QY 3121 AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATACAAAAAGTGGGTA 3180	QY 3061 GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAATA 3120	QY 3001 AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGT 3060 DD 3001 AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGT 3060	QY 2941 AAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATTGTAAGAGAAAAC 3000	QY 2881 TTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAATTGAG 2940
Qy 10 Db 10 Qy 10 Db 10 Db 11	00 00 00 00 00 00 00 00 00 00 00 00 00	20 QY	0	Qy d	Qy Db	Qy dd	Qy .	Qy Db	Db 99	Db Qy	Qy Db	Qy 1
021 GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTTGGCAAGAGCATCCCCGGAGCCA 1080	901 TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAGAA 960	781 AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTT 840	661 AGAGAGCTACTAAAAAAGGATTGTGCAGAAAAACTGGTTCTCTGCATTTCTGAATGTT 720	601 ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA 660 	541 CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAACTGTTG 600	481 CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCACT 540 	421 AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCTCT 480	361 ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGG 420	301 CAGATTCAGAGGACAGTCGCCACCTCCGGGAACATGCAGGCAG	241 TACATCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTCTGCCTGC	181 TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATG 240 	21 CAGCACCATCTGCTTGGGAGAACCCTCTCCCTTCTCTGAGAAAGAA

228	N N	Qy 2161 Db 2161	210 · 210	204			ים ע		Qy 1741 Db 1741	ы ы	<u>.</u> .	ט ט	TOU	. د
ATACCATAATGGAG		<u>2</u> —2	SATGAGGGTGGT SATGAGGGTGGT	TGAAACTTTC TGAAACTTTC	43 — 43	atggaaaaaaaagctgcaa atggaaaaaaagctgcaa	¥—¥	accagagaagatccattta accagagaagatccattta	CTTGATCAACTGAAAAACC 	CACATTTAAAACTATGTG CACATTTTAAAACTATGTG	CTGGGACTAACAGCTTCAC	AAGTTGAAAAACAATAGACTC	GICAICACACCAA	TGTCATCACCACCAACAAAGAAGCI
ATATACTAGGACTG)	GCTGAAAACCCAGAATATGAAA! 	TTCTCATO	ATGGTGAI ATGGTGAI	;agaaagataagaa ;agaaagataagaa	ACACAATT	GCAAAAAAGGAAATCGCAAAGAACC 	DAGATTTTGGAACTCAACC 	atttaaagagaaacttctagaaataatg <i>i</i> 	AAATACAGGAGCCAT(AAATACAGGAGCCAT(CCAATCTTGATGCATTTACT CCAATCTTGATGCATTTACT	TIGGTGTTGGAGGGGCCAC 	TCAAGAAAGAAAACAAACCAGTGATTC	AGTGTATAATAACAT	\GTGTATAATAACAT
CAGCACGAGGAATAATCTT	NATGAAAAGCTGACCAAATTA 	CTTTATTTTTGAAAACAA 	aagatgaggatgatt <i>t</i> aagatgaggatgattt <i>t</i>	TTGCAGTCATAGAAGAI TTGCAGTCATAGAAGAI	rcgaatgatagatgcgtatact cgaatgatagatgcgtatact	CGTGTTTGTGCAGAACATTTG	CTATGAACAATGGGCCATTCAA	ATGACAAGGATTCAAACTTAT 	3CAAGAAGTTTGCCATTGCAGATGC! 	ATTAAAACTGTTAAAGAAAAC ATTAAAACTGTTAAAGAAAAC	:GAAGCAAGCCAAAGCTGAAGAA 	AGTGATTCCCCTTCCTCAGATA	CATGAGGCATTATTTGATGCAG	
	TA 2280 	T-T	NG 2160	AT 2100 	CT 2040	TG 1980	19 19	18 18	CA 1800 	17 17	P P	16 16	15 15	_
Ş	B 5	S B 5	D QY	dg dy	dg dy	B 4	S B 5) B 2	B 5	S & &	}	S B 4) B	
3361 CTCTG 3365	OI TGATTAATG	41 GATTAGCAC	81 GAATTACCTATCACATTTCCCAATCT 	21 AGGAATTTTGTAGTGGTTT	1 GGCCAGGCTTGGGGAACAA 1 1 GGCCAGGCTTGGGGAACAA	01 AAAGCACTGCAAAAAGAAGTGTGCC	CACGICAATATGACC	881 TTCCTTTGCAAAAACTGCAGTGTGC	B21 AAAATGAAAACCAA	761	701 ACAGI	641	581 ATCCGTTATGGTCT	
				TCAACAAAGAAACAATACAAA	AAAGGCTTAGA	GROCATA ACCOUNTS OF THE COUNTY	CHARTICANGANCTITACATTGT	TGTTCTGGGGAA	CATTACAAGAATAACCCATCA	GAATTACAGATGCAAAGTATA	TATAAAGCTATA	CACAGTGGTTCAGGAGTTAT	AGCCATGGTCCAGGC	

61 CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACATTTCACCTGTCCCGCAGACAA	FCATTGTCAGGCACAGAGCGG	Query Match 100.0%; Score 3365; DB 8; Length 3380; Best Local Similarity 100.0%; Pred. No. 0; Matches 3365; Conservative 0; Mismatches 0; Indels 0; Gaps 0;	AIHCVQNMKPEEYAHKILELQMQSIMEKKMKTKRNIAKHYKNNPSLITFLCKNCSVLA CSGEDIHVIEKMHHVNMTPEFKELYIVRENKALQKKCADYQINGEIICKCGQAWGTMM VHKGLDLPCLKIRNFVVVFKNNSTKKQYKKWVELPITFPNLDYSECCLFSDED" ORIGIN	HLETFYNESEKDKKFAVIEDDSDEGGDDEYCDGDEDDDLKKFLKLDETDRFIMTLFFE NNKMLKRLAENPEYENEKLTKLRNTIMEQYTRTEESARGIIFTKTRQSAYALSQWITE NEKFAEVGVKAHHLIGAGHSSEFKPMTQNEQKEVISKFRTGKINLLIATTVAEEGLDI KECNIVIRYGLVTNEIAMVOARGRARADESTYVLVAHSGSGVIEHETVNDFREKMMYK	DTOLKI S PEVVKSODI I STAQI LENSLILINE GELAGVOLSDESLI I I DECHETIK EAVYNNIMRHYLMOKLKNINRLKKENKPVI PLPQI LELTAS PGVGGATKOAKAEEHI LK LCANLDAFT I KTVKENLDQLKNQI OEPCKKFAI ADATREDPFKEKLLEIMTRI QTYCQ MSDMSDFGTODVEOWA I OMEKKAAKKGNB KERVCAEHI. RXYNBAI.OI NOTI RMI DAVT	ESGVRELLKRI VQKENWFSAFLNVLRQTGNNELVQELTGSDCSESNAEI ENLSQVDGP. QVEEQLLSTTVQPNLEKEVWGMENNSSESSFADSSVVSESDTSLAEGSVSCLDESLGH NSNMGSDSGTMGSDSDEENVAARAS PEPELQLRPYQMEVAQPALEGKNI I I CLPTGSG	/ PLOCE II - PROJECT - PRO	·	gene /tissue_type="melanoma" 13380 /gene="MDA5" /gene="MDA5"		JOURNAL Submitted (30-SEP-1998) Urology, Columbia University, P&S, 630 W168th, New York, NY 10032, USA FEATURES Location/Qualifiers source 13380	11805321 2 (bases 1 to 3380) Kang,DC. and Fisher,P.B. Direct Submission	TITLE mda-5:, F. D. double-stranded RNA-dependent ATPase activity and melanoma growth-suppressive properties JOURNAL Proc. Natl. Acad. Sci. U.S.A. 99 (2), 637-642 (2002)	Homo. to 3380) Gopalkrishnan,R.V., Wu,Q., Jankowsky,E., Pyle,A	ORGANISM Homo sapiens (human) ORGANISM Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia: Eutheria: Euarchontoglires: Primates: Catarrhini;	MRNA, complete cds. AF095844 AF095844.1 GI:11344593	ens melanoma differentiation associated protei	Db 3361 CTCTG 3365
Qy 1141 ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAG 1200	Qy 1081 GAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	1021 GGCACCATGGGAAGTGATTCAGATGAAGAGTGTGGCAGCAAGAGCATCCCCGGAGCCA 1	961 GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATGGGCAGTGATTCA 1 	Qy 901 TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAGAA 960 	QY 841 CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGGCATGGAGAATAACTCA 900	QY 781 AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTT 840	Qy 721 CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAA 780	Qy 661 AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAACTGGTTCTCTGCATTTCTGAATGTT 720	Qy 601 ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA 660	Qy 541 CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAAGCTGTTG 600	QY 481 CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCACT 540	QY 421 AGAACCGGCAGCCCTCTGGCCCGCCTACATGAACCCTGAGCTCACGGACTTGCCCTCT 480	Qy 361 ACCTTGGAGAAGGAAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGG 420	QY 301 CAGATTCAGAGGACAGTCGCCACCTCCGGGAACATGCAGGCAG	QY 241 TACATCCAGGTGGAGCCTGTGCTGGACCTACCTGACCTTTCTGCCTGC	QY 181 TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATG 240	QY 121 CAGCACCATCTGCTTGGGAGAACCCTCTCCCTTCTCTGAGAAAGAA	

D Qy	D Qy	90 90	Qу	D Q	Db Qy	g VQ	B 8	B 8	Db Qy	g dy	d dy	90 VQ	D Q	QQ dg	d Qy	Qy Db	d dd YO	DЬ
AAAATGTTGAAAAGGCTGGCTGAAAACCCCAGAATATGAAAATGAAAAGCTGACCAAATTA 	AAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAAAC	AGTGATGAGGGTGGTGATGATGAGTATTGTGATGGTGATGA	CATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGAT 21 	AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATACT 20	1921 ATGGAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG 1980 	TGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA 19 	ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTAT 18	CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 18	1681 CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAGAAAAC 1740 	CTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCAAGC	1561 AAGTTGAAAAACAATAGACTCAAGAAAGAAAACAAACCAGTGATTCCCCTTCCTCAGATA 1620 	TGTCATCACACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAG 15 	GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCATTATCATTGATGAA 15	1381 AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCCCTCTTAAACTTG 1440 	TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATTTCCAGAAGTTGTC 13 	AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAAATGG 13	GATCACTTAGACAAGAAGAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAAT 12	1141 ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAG 1200
·····					<u>.</u>								-					
מם	Q B :	Q D :	OV Db	νQ dd Q	O B 1	₽ #	Q B 1	ov p	o d	o B	ov D	O B	8 B	O B	o p	OV Db	Q B 4	Ş
301 TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA						001 AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGT							581 ATCCGTTATCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA					accataatggagcaatatactaggactgaggaatcagcacgag

QY 541 CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAGGAACTGTTG 600	QY 481 CCATCGTTTGAGAACGCTCATGATGATATCTCCAACTGCTGAACCCTCCTTCAGCCCACT 540	QY 421 AGAACCGGCAGCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCTCT 480	QY 361 ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGG 420	QY 301 CAGATTCAGAGGACAGTCGCCACCTCCGGGAACATGCAGGCAG	241 TACATCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTCTGCCTGC	181 TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATG 24	QY 121 CAGCACCATCTGCTTGGGAGAACCCTCTCCCTTCTCTGAGAAAGAA	1 CCTGCTTCTC 5 CCTGCTTCTC	1 GCGCGCCGGCCTGAGAGCCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC 60 	Query Match 99.9%; Score 3361.8; DB 6; Length 3434; Best Local Similarity 99.9%; Pred. No. 0; Matches 3363; Conservative 0; Mismatches 2; Indels 0; Gaps 0;	source 13434 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606" ORIGIN	JOURNAL Patent: WO 2005016962-A 3369 24-FEB-2005; Genentech, Inc. (US) FEATURES Location/Qualifiers	ĎΩ	SOURCE Homo sapiens (numan) ORGANISM Homo sapiens ORGAMISM Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Ucminidae. Homo	CS033863 .1 GI:60732714	S03386	Db 3361 CTCTG 3365
1675 CTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCAAGC		TCATGAGGCATTATTTGATGCAG 161 CAGTGATCCCCCTTCCTCAGATA 162	1495 GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCATTATCATCATGAAGAA 155	1301 AMGICCIGIALALIALIA IA CARACTECTEGA CARCTECA CARCTECA CARCACTECA TRANSCATE 149 1435 AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCCTCTTAAACTTG 149	1321 TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATT	61 AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAAATGG 132 	55 GATCACTTAGACAAGAAAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAAT 131	1141 ATCATO 1195 ATCATO	1081 GAACTCCAGCCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	021 GCACCATGGGAAGTGATTCAGATGAAGAGAATATGTGGCAGCAAGAGCATCCCCGGAGCCA 1	961 GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATGGGCAGTGATTCA 102 	QY 901 TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAGAA 960	9 9	OY 781 AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTT 840	Qy 721 CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAA 780	QY 661 AGAGAGCTACTAAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTGCATTTCTGAATGTT 720	QY 601 ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA 660

.

.

```
2761
                                                                     2635
                                                                                                                                        2461
                                                                                                                                                                    2401
                                                                                                                                                                                                             2335
                                                                                                                                                                                                                                        2275
                                                                                                                                                                                                                                                                    2215
                                                                                                                                                                                                                                                                                                                          2095
                                                                                                                                                                                                                                                                                                                                                                                  1975
                                                                                                                                                                                                                                                                                                                                                                                               1921
                                                                                                                                                                                                                                                                                                                                                                                                             1915
                                                                                                                                                                                                                                                                                                                                                                                                                           1861
                                                                                                                                                                                                                                                                                                                                                                                                                                        1855
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1801
                                                                                                2575
                                                                                                              2521
                                                                                                                           2515
                                                                                                                                                                                                                          2281
                                                                                                                                                                                                                                                                                 2161
                                                                                                                                                                                                                                                                                                                                                                    1981
                                       GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG
                                                                                                                                                                                                                                                                                                                                                                                                             ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG
             ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG
                                                                    ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA
                                                                                                                                                        GCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA
                                                                                                                                                              GCTGAAGTAGGAGTCAAAGCCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA
                                                                                                                                                                                  ATGGAAAAAAAAGCTGCAAAAGAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG
                                                                                                                                                                                                                                                                                                                                                                                         ATGGAAAAAAAAGCTGCAAAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG
                                                                                                                                                                                  2454
                                                                                                                                                                                                2400
                                                                                                                                                                                                             2394
                                                                                                                                                                                                                           2340
                                                                                                                                                                                                                                         2334
                                                                                                                                                                                                                                                                                  2220
                                                                                                                                                                                                                                                                                                             2160
                                                                                                                                                                                                                                                                                                                                                                     2040
                                                                                                                                                                                                                                                                                                                                                                                                              1974
                                                                                                                                                                                                                                                                                                                                                                                                                           1920
                                                                                                                                                                                                                                                                                                                                                                                                                                         1914
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1860
                          2760
                                         2754
                                                       2700
                                                                     2694
                                                                                                 2634
                                                                                                                            2574
                                                                                                                                         2520
                                                                                                                                                        2514
                                                                                                                                                                    2460
                                                                                                                                                                                                                                                       2280
                                                                                                                                                                                                                                                                     2274
                                                                                                                                                                                                                                                                                                2214
                                                                                                                                                                                                                                                                                                                            2154
                                                                                                                                                                                                                                                                                                                                         2100
                                                                                                                                                                                                                                                                                                                                                       2094
                                                                                                                                                                                                                                                                                                                                                                                  2034
```

\$

밁

S B

5

음 성 음

청 음 성 음

Ś

음 성

В

Ş

g 8

밁

Ş

. .

0; Gaps

<u>.</u>

र्

성 음 성

음 성 음

밁

중 음 성

밁 ર્જ 망

```
RESULT 6
CS036676
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                     ORIGIN
                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                            FEATURES
source
                                                                                                                                                                                                                                                                                                                                                                       B 8 B B
                                                                                                                                                                                                                                                                                                        중 음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     장 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    日
Query Match
Best Local Similarity
Matches 3363; Conser
                                                                                                         JOURNAL
                                              Abbas, A., Compositions and Compositions and diseases
AL Patent: WO 2005016962-A 6182 Genentech, Inc. (US)
Location/Qualifiers
1. 3434
'organism="Homo sapi
                                                                                                                                                                                                                                                                                                                                                                        3295
                                                                                                                                                                                                                                                                                                                                                                                                                                                   3175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2815
                                                                                                                                                                                                                                                                                                                                                                                          3241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2941
                                                                                                                                                       Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; C
Mammalia; Eutheria; E
Hominidae; Homo.
                                                                                                                                                                                                                CS036676
Sequence 618
CS036676
CS036676.1
                                                                                                                                                                                                                                                                                                                                 TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA 3360
                                                                                                                                                                                                                                                                                                                                                                      GATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACA:
                                                                                                                                                                                                                                                                                             CTCTG
                                                                                                                                                                                                                                                                                                                                                                                                             AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAAS
                                                                                                                                                                                                                                                                                                                CTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAA
99.9%;
nilarity 99.9%;
Conservative
                                                                                                                                                                                                                                                                                                             3365
                                                                                                                                                                                                                                                                                             3419
                                                                                                                                                                                                                                    6182
                                              organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                 GI:60734150
                                                                                                                                                                                             (human)
                                                                                                                                                                                                                                    from
                                                                                                                             methods for the treatment
                                                                                                                                                                                                                                   3434 bp DNA
Patent WO2005016962
                                                                                                                                                                  Chordata; Craniata; Vertebrate Euarchontoglires; Primates;
  Score 3361.8;
Pred. No. 0;
0; Mismatches
                                                                                                           24-FEB-2005;
                     BB
                                                                                                                           ,M.P.,
                   Leng
                                                                                                                                                                  nta; Euteleostomi;
Catarrhini;
                     th 3434;
                                                                                                                             od, W.I. and Wu, T.D. mune related
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACAAAAAGTGGGTA 3180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATCACTAATAACT 2934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FATTTAGTGATGAG 3240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGTAAGAGAAAAC 3054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ICCATGTAATTGAG 2940
||||||||||||
ICCATGTAATTGAG 2994
                                                                                                                                                                                                                                                                                                                                                                        VTTTAATATGATTA 3354
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAAAAGTGGGTA 3234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCTGCAAATGT 3114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCACTAATAACT 2880
                                                                                                                                                                                                                                                                                                                                                                                         TTTAATATGATTA 3300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGTCTCAAAATA 3174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCTGCAAATGT 3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGTCTCAAAATA 3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTAAGAGAAAAC 3000
                                                                                                                                                                                                                                              PAT 10-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2874
```

T.	2 Oy 1		φ φ	. vo	Db Qy	P Q	Qy bb	D Q	B 8	Db Qy	Qy Db	Qy Db	Db Qy	A dd	₽ 9	Qу	אס פס	ş 8
075 GGUACUA	021 GGCACCA	961 GGAAGTG	TCAG	CTTT	AGCA AGCA	CTTC	AGAG AGAG	ACAA ACAA	9917 	CCAT	AGAA AGAA	361 ACCTTGGAO	301 CAGATTCA(355 CAGATTCA(241 TACATCCAC 295 TACATCCAC	181 TATTCCAC	121 CAGCACCA: 175 CAGCACCA:	61 CCTGCTTCT	
GGGAAGTGATTCA GCTCAGGCCTTAC	GGAAGTGATTCA	TCAGCTGCTTAGATGAAAGTO	ATCTTTTGCAGAT ATCTTTTGCAGAT	CACAGTTCAGCCA	\GAGATTGAGAAT \GAGATTGAGAAT	VACAGGAAACAAT VACAGGAAACAAT	ACTAAAAAGGATT ACTAAAAAGGATT	NGACAGAAACCGG NGACAGAAACCGG	CAAGCTTCTAGTT CAAGCTTCTAGTT	IGAGAACGCTCATI GAGAACGCTCAT	AGCCCTCTGGCC	BAAGGGAGTCTGG BAAGGGAGTCTGG	BAGGACAGTCGCC BAGGACAGTCGCC	GETGGAGCCTGTG GETGGAGCCTGTG	AGACGAGAATTTC AGACGAGAATTTC	rctgcttgggaga ctgcttgggaga		
GATGAAGAGAATG CAAATGGAAGTTG	GATGAAGAGAATG	GAAAGTCTTGGAC GAAAGTCTTGGAC	ICTTCTGTAGTTT CTTCTGTAGTTT	AATCTGGAGAAGG AATCTGGAGAAGG	FTATCACAAGTTG TATCACAAGTTG	GAACTTGTCCAAG SAACTTGTCCAAG	GTGCAGAAAGAAA GTGCAGAAAGAAA	ATTGCTGCTGCAG ATTGCTGCTGCAG	AGAGACGTCTTGG AGAGACGTCTTGG	BATGAATATCTCC BATGAATATCTCC	GCCCGCTACATGA GCCCGCTACATGA	CACCTTGGTTGGA CACCTTGGTTGGA	ACCTCCGGGAACA ACCTCCGGGAACA	CTGGACTACCTGA CTGGACTACCTGA	CGCTATCTCATCT CGCTATCTCATCT	ACCCTCTCCCTTC	TIGGACAACCTCG CGGACAGCGGCAC 	CCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCG
CCCAGCCAGCCT	TGGCAGCAAGAGG	aagtettggacataacagcaacatgggcagtgatt aagtetyggacataacagcaacatgggcagtgatt	CAGAATCAGACA(AGGTCTGGGGCA: AGGTCTGGGGCA:	ATGGTCCTCAAGI ATGGTCCTCAAGI	AGTTAACAGGCTO	ACTGGTTCTCTGO	AAAACAATGGAAJ AAAACAATGGAAJ	ATAAGTGCATGG ATAAGTGCATGG	AACTGCTGAACCT AACTGCTGAACCT	ACCCTGAGCTCAC ACCCTGAGCTCAC	CTCGGGAATTCG;	TGCAGGCAGTTG!	CCTTTCTGCCTGC	cerectrcaees	TCTGAGAAAGAA! TCTGAGAAAGAA!	TCATTGTCAGGC	TCATTGTCAGGC!
JATUCUUGGAGCU IGGAAGGGAAGAA	ATCCCCGGAGCC	RGGCAGTGATTCA	DAAGTTTGGCAGA DAAGTTTGGCAGA	IGGAGAATAACTC! IGGAGAATAACTC!	ATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTT 	TGATTGCTCAGA	CATTTCTGAATGTT .	ATGAATCAGGTGTA ATGAATCAGGTGTA	AGGAGGAACTGTTG AGGAGGAACTGTTG	rccttcagcccact	ನ=ಡ	RGGAGGCCCTCCGG	AACTGCTGCTGAGC	CAGAGGTGAAGGAG AGAGGTGAAGGAG	CAGGGTGAAAATG CAGGGTGAAAATG	AGATGTCGAATGGG AGATGTCGAATGGG	ACAGAGCGGTAGAC 	ACAGAGCGGTAGAC
	1	1 1	10 96	96 -	7-7	P 78	r 72	A 66	9 6 6	7 5 5 5 5 5	7 - F	4, 4,	36 41	35	29	2 1	12	60
																	<u> </u>	
Q	A 4d	90 V2	ag Q	}) B 64	₽ . \$) B (? B 4	S B &	5 B &	S B &	S B 8	ב אם אל י	5 B &	5 B &	S B 8	Q	DЬ
2161	2101 2155	2041 2095	2035	1975	1861 1915	1855	1795	1735	1675	1615	1555	1495	1435	1375	. 1315	1255	1141	1135
2161	2101 2155	2041 2095	2035	1975	1861 1915	1855	1795	1735	1675	1615	1555	1495	1435	1375	. 1315	1255	1141	1135
2161	2101 2155	2041 2095	2035	1975	1861 1915	1855	1795	1735	1675	1615	1555	1495	1435	1375	. 1315	1255	1141	1135
2161	2101 2155	2041 2095	2035	1975	1861 1915	1855	1795	1735	1675	1615	1555	1495	1435	1375	. 1315	1255	1141	1135
. 21	- N N	N N	1981 AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGI	1921 ATGGAAAAAAGCTGCAAAAAAGGAAATCGCAAAGAACGTGTTTGTGC	1861 TGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATG	1855 ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGAT	1711 CITCHIC CANADA CAMATA CAGAGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCCATGCAAGAAGTTTGCAAGAAGTTTGCCATGCAAGAAGTTTGCAAGAAGAAGTTTGCAAGAAGAAGTTTGCAAGAAGTTTGCAAGAAGAAGTTTGCAAGAAGAAGTTTGCAAGAAGAAGTTTGCAAGAAGAAGTTTGCAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAAGAA	1735 CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGT	1675	1501 ANGITEGAAAAACAATAGACTCAAGAAAACAAACCAGTGATTCCCC	1501 IST CALCACCACCAACAAGAAGCAGTGTATAATAACATCATGAGGCATTA:	1441 GAAAATIGGAGAAGATIGCIGGTGTTCAATTIGTCAGACTTTTCCCTCATTAT	1435 AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCCCT	1375 TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATTTCC	1315 AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTT	1255	1141 ATCATCTGCCTCCCTACAGGGAAGTGGAAAAACCAGAGTGGCTGTTTA	

```
2995
                                                                                                                                                                                                                                                 2701
                                                                                                                                                                                                                                                                                                                                                                    2455
                                                                                                                                                                                                                                                                                                                                                                                               2395
                                                                                                                                                        2935
                                                                                                                                                                                                                        2761
                                                                                                                                                                                                                                                                                                     2581
                                                                                                                                                                                                                                                                                                                  2575
                                                                                                                                                                                                                                                                                                                                                                    AAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCATCACTAATAACT
                                                                                                                                                                                                           GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG
                                                                                                                                                                                                                                                                                       ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA
                                                                                                                                                                                                                                                                                                                 CTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTT
                                                                                                                                                                                                                                                                                                                                                                                             TTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAATTGAG
                                                                                                                                                                                                                                      ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG
                                                                                                                                                                                                                                                                                                                                           CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAAATCAAT
                          AAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAAACAAT
                                                                                         3120
                                                                                                                                                                                                                                                               2754
                                                                                                       3114
                                                                                                                   3060
                                                                                                                                3054
                                                                                                                                                                                                            2874
                                                                                                                                                                                                                                       2814
                                                                                                                                                                                                                                                   2760
                                                                                                                                                                                                                                                                            2700
                                                                                                                                                                                                                                                                                         2694
                                                                                                                                                                                                                                                                                                                                2580
                                                                                                                                                                                                                                                                                                                                            2574
                                                                                                                                                                                                                                                                                                                                                         2520
                                                                                                                                                                                                                                                                                                                                                                     2514
                                                                                                                                                                                                                                                                                                                                                                                  2460
                                                                                                                                                                                                                                                                                                                                                                                               2454
                                                                                                                                                                                                                                                                                                                                                                                                           2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                  2334
                                                                                                                                                                                                                                                                                                                                                                                                                                                              2280
             3300
                                                                                                                                                                                   2934
                                                                                                                                                                                                2880
                                                                                                                                                                                                                         2820
                                                                                                                                                                                                                                                                                                      2640
                                                                                                                                                                                                                                                                                                                  2634
                                                                                                                                                                                                                                                                                                                                                                                                                         2394
                                                                                                                                                                                                                                                                                                                                                                                                                                     2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2274
```

음 성 음 성

유 상

음 성

음 성 음 성

음 성

밁

음성 음성

유왕

유왕

Ş

5

유

8 8

B &

```
RESULT 7
CS042815
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                  유 성 유 성 유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                               밁
                                                                                                                                                                 Ş
                                                                                                                                                                                유장
                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
       중 음 중
                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                  Query Match 99.9%;
Best Local Similarity 99.9%;
Matches 3363; Conservative
                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3301
                                      421
                                                                                       355
                                                                                                     301
                                                                                                                      295
                                                                                                                                                                    181
                                                                                                                                                                                   175
                                                                                                                                                                                                                    115
                                                       415
                                                                       361
                                                                                                                                                     235
                                                                                                                                                                                                   121
                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                    ហ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CS042815
Sequence
CS042815
CS042815.
                                                                                                                                                                                                                                                                   μ
                                                                                                                                                                                                                                                                                                                                                               Abbas, A., Clark, H., Ouyang, W., Williams, P.M., Compositions and methods for the treatment of diseases
Patent: WO 2005019258-A 3369 03-MAR-2005;
Genentech, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrat
Mammalia; Eutheria; Euarchontoglires; Primates; C
Hominidae; Homo.
                                                                                                                                                                                                                                                  GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CICIG
                                                       ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGT
                                                                                      CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACACTTTCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CICIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACT
                       AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCAC
                                                                                                                                                                                                                                                                                                                        WO 2005019258-A 3369 03-MAR-2
Ch, Inc. (US)
Location/Qualifiers
1. .3434
/organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3434
Patent WO2
                                                                                                                                                                                                                                                                                  Score 3361.8;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                434 bp DNA
WO2005019258
                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                   6
                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                  Lengt
                                                                                                                                                                                                                                                                                                                                                                                          Wood, W.I. and Wu, T.D. immune related
                                                                                                                                                                                                                                                                                                                                                                                                                        ta; Euteleostomi; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAATGATTGTTTTA 3360
|||||||||||
NAATGATTGTTTTA 3414
                                                                                                                                                                                     GATGTCGAATGGG
                                                                                                                                                                                                                    rGTCCCGCAGACAA 174
                                                                                                                                                                                                                                                   h 3434;
                                                        GGAGGCCCTCCGG 420
                                                                                                     ACTGCTGCTGAGC 360
                                                                                                                                                                                               GATGTCGAATGGG 180
                                                                                                                                                                                                                               GTCCCGCAGACAA 120
CCTTCAGCCCACT
                        GGACTTGCCCTCT 480
                                                                                                                               AGAGGTGAAGGAG 300
                                                                                                                                                                                                                                                              CAGAGCGGTAGAC 60
                                                                                        ACTGCTGCTGAGC
                                                                                                                       AGAGGTGAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 22-MAR-2005
                                                                                                                                                                                                                                                                                    0; Gaps
                                                                                                                                                                                     234
         540
                                                                                                                       354
                                                                                        414
                                                                                                                                                                                                                                                                                    0
```

g Q	g 4	g 9	Qy dd	당 왕	φ φ	B &	D 29	D &	dy Qy	φ Q	B &	ОУ	φ φ	B &	g &	₽ &	Db QY	dd
561 AAGTTGAAAAACAATAGACTCAAGAAAAGAAAACAAACCAGTGATTCCCCCTTCCTCAGATA 1 	501 TGTCATCACACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGAT 	441 GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCATTATCATTGATGAA 1 	1 AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCCCTCTTAAACTTG 1	321 TATCGTGTTATTGGATTAAGTGGTGATACCCAAC	261 AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGA 	201 GATCACTTAGACAAGAAGAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAAT 12 	141 ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAG 12 	081 GAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	021 GGCACCATGGGAAGTGATTCAGATGAAGAGAGATGTGGCAGCAAGAGCATCCCCGGAGCCA 1 	961 GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATGGGCAGTGATTCA 10 	01 TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAGAA 96 	41 CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGCATGGAGAATAACTCA 9 	81 AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTT 84 	21 CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAA 78 	61 AGAGAGCTACTAAAAAGGATTGTGCAGAAAAGAAAACTGGTTCTCTGCATTTCTGAATGTT 72 	01 ACAATTGAAGACAGAAACCGGATTGC 	41 CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAGG 	35 CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCACT 5
D s	S B 7	Q B 4	\$ B \$	B 6	}) P &	ם מ	Q	S B &	S B 8) D 4	S B &	B &) B (S B &	B 1	о Д	§
695 GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG	35 ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA 2	575 CTGCTTATCGCTACCACAGTGGCAGAAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTT 2	XIGACACAGAAIGAACAAAAAGAAGICATIAGIAAA 	#01 GC GANG TANGKG TO CANCELL TO THE TOTAL CONTROL OF THE TOTAL CONTROL	341 ACAMMACACGACAGAGIGCATATGCGCTTTCCCAGTGGATGGATGGATGTGATGCGACTTTCCCAGTGGATGATGCGACTTTCCCAGTGGATGATGCGACTTTCCCAGTGGATGATGCGACTTTCCCAGTGGATGATGATGATGTGATGATGATGATGATGATGATG	281 AGAMATACCATAMIGGAGCAMIATAC I AGGAC IGAGGAMIC CAGCACGAGGAMIANIC I I I I I I I I I I I I I I I I I I	275 AAAATGTTGAAAAAGGCTGGCTGAAAAACCCAGAATATGAAAAATGAAAAAGCTGACCAAATTA 2			041 CHICLICANACITICIALIANI GAMBAGAMAGATAAGAAGATTTGCAGTCATCAGTAGAAGATTAGAAGATTAGAAGATTAGAAGATTAGAAGA	035 AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGACATAGATAG		TELEMANTICAS ICAMISICAS ILIGAMACICAM ISSUED IN THE STATE OF THE STATE	55 ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTAT 1	1			TAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCAAGC

TITLE JOURNAL FEATURES SOURC	DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS	Qy 3 Qy 3 Db 3 RESULT 8 CS045628	рь 3 Qy 3 рь 3	QY 3 3 QY 3 3 QY 3 3 3 QY 3 3		Qy 2 Db 2 Db 2	Qy 2 Qy 2 Qy 2 Db 2
Compositions and methods for the treatment of immune related diseases Patent: WO 2005019258-A 6182 03-MAR-2005; Genentech, Inc. (US) Location/Qualifiers 13434 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"	Course Co	355 TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA 34 361 CTCTG 3365 415 CTCTG 3419	235 GAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTAJ 236 GAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTAJ 241 GATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACATJ 241	115 GGC 121 AGG 175 AGG 181 GAA	941 AAAATGCATCACGTCAATATGACCCCCAGAATTCAAGGAACTTTACATTGTAAGAGAAAAC 300	821 AAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCCATCACTAATAACT 28	ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG 2760
D	\$ \$ \$ \$ \$ \$		א ש ש א	2	D Q D Q	D Q D Q	Query Best L Best L Matche Qy
895 CTTTCAÁCCACAGTTCAGCCAAATCTGGAGAAGAGGAGGTCTGGGGCATGGAGAATAACTCA 954 901 TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTTGGCAGAA 960	21 CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAA 7	95 CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGAAGGAGGAACTGTTG 01 ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACCAATGGAAATGAATCAGGTGTA	TIGCCCTCT TIGCCCACT CAGCCCACT	01 CAGATTCAGAGGACAGTCGCCACCTCCGGGAACATGCAGGCAG	181 TATTCCACAGACGAGAATTTCCGCTATCTCATCCTCGTGCTTCAGGGCCAGGGTGAAAATG 240	1 CCT 5 CCT 1 CAG 1 CAG 5 CAG	Match 99.9%; Score 3361.8; DB 6; Length 3434; Local Similarity 99.9%; Pred. No. 0; Les 3363; Conservative 0; Mismatches 2; Indels 0; Gaps 0; 1 GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC 60

5
1021 GECACCATGGRAMTGAGATTGAGATGAGACATTGGGCCGAGAAGAGATTCCCCGGGCCCCTTGCAAAGAGAATTCAATTGAGAAGTAGATTCAATTGAGAAGTAGAAGTAGAATTGAGAAGTAGAAGA
2
216 ANACCITICANACICACIANCACIANACICATIONACIANTICANACIANTICANACICATIONACIANTICANACICALITATICA CONTROLLI IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII

Q	Db	8	Query l Best Lo Matche	ORIGIN						CDS	source	JOURNAL FEATURES	AUTHORS	REFERENCE	SOURCE ORGANISM	DEFINITION ACCESSION VERSION	RESULT 9 AX300832	Qy VQy	D 99	P 64	DЪ
75 TGGGCAGCGGACAGCGGCACGCACATTTCACCTGTCCCGCAGACAACAGCACCATCTGCT 134	1 GGGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGACCCCTGCTTCTCTAAG 60	15 GAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGACCCCTGCTTCTCTAAG 74	<pre>Match 99.2%; Score 3338.8; DB 6; Length 3372; Local Similarity 99.8%; Pred. No. 0; les 3343; Conservative 0; Mismatches 7; Indels 0; Gaps 0;</pre>		KECNI VIKIGHVINEIAMVQAKGKAKADESII VHVAHSGSGVIEKEI VNUFKEKMIT K AIHCVQMMKPEEVAHKILELQMQSIMEKKMKTKRNIAKHYKNNPSLITFICKNCSVLA CSGEDIHVIEKMHHVNMTPEFKEHVIVRKALQKKCADVQINGEIICKCGQAWGTMM VHKGI.DI.PCI.KIRNFVVVPKNNSTKKOVKKWVEI.PTTFDNI.DVSECCI.FSDED"	MS PMSDFGIQFIEQWAIQMANAKEGNKKESV VCAEHLKKINGALQINDIIKMILFEE HLETFYNEEKDKKFAVIEDDSDEGGDDEYCDGDEDEDDLKKPLKLDETDRFLMTLFFE NNKMLKRLAENPEYENEKLTKLRNTIMEQYTRTEESARGIIFTKTRQSAYALSQWITE NEKFAEVGVKAHHLIGAGHSSEFKPMTQNEQKEVISKFRTGKINLLIATTVAEEGLDI	DTQLKISFPEVVKSCDI IISTAQILENSLLNLENGEDAGVQLSDFSFIIIDECHHTNK EAVYNNIMRHYLMQKLKNINRLKKENKPVI PLPQILGLTASPGVGGATKQAKAEEHILK LCANLDAFTI KTVKENLDQLKNQI QEPCKKFAI ADATREDPFKEKLLEIMTRIQTYCQ	ESGVRELLKRIVQKENWFSAFLNVLRQTGNNELVQELTGSDCSESNAEIENLSQVDGP QVEEQLLSTTVQPNLEKEVWGMENNSSESSFADSSVVSESDTSLAEGSVSCLDESLGH NSNMGSDSGTMGSDSDEENVAARASPEPELQLRPYQMEVAQPALEGKNIIICLPTGSG	/procert_rd="Cabito".i. /db_xref="Gi".cabito".i. /db_xref="Gi".cabito".i. /translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE /translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE QIQRTVATSGNMQAVELLLSTLEKGVWHLGWTREFVLARTGSPLAARYMNPELTDL pspssfraahnsylollniloptlyngllynglarden.	1557.3232 /note="unnamed protein product" /codon_start=1 /rootsiz_id_"Canada 1"		Patent: WO 0185955-A 1 15-NOV-2 Istac (FR) ; INSTITUT PASTEUR D Location/Qualifiers		Mammaila; Eucherla; Euchernontogilles; Fi Hominidae; Homo	Homo sapie Homo sapie Eukaryota;	AX300832 ON Sequence 1 from Patent WO0185955. N AX300832 AX300832.1 GI:17382110		3361 CTCTG 3365 3415 CTCTG 3419	3301 TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA 3360 	3241 GATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTA 3300	235 GAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTATTTA
dd V	? !	₽ 5) B 4	2	Db 9	Db Qy	D Qy	Qy	Qy	Ωy	Db Qy	שמ	\$ 8	P 9	Db Qy	Db Qy	Db Qy	D Qy	Qу	р <i>Қ</i>	ם d
1 CCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAGGATCACTTAGACAA 1	ES COCTACTACTOS CATOS AS ACOS CATOS	<u>بە</u> ر	021 TGATTCAGATGAAGAATGTGGCAGCCAAGAGCATCCCCGGAGCCAGAACTCCAGCTCAG 1	TE TENTTENGATGANGANTGTESCANGENAGANGENTECCEGNAGECANGANCTECANGETENN 10	975 CTTAGATGAAAGTCTTGGACATAACAGCAACATGGGCAGTGATTCAGGCACCATGGGAAG 1034 	915 TGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTTGGCAGAAGGAAG	855 TCAGCCAAATCTGGAGAAGGAGGTCTGGGGCATGGAGAATAACTCATCAGAATCATCTTT 914	795 TGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTTCTTTCAACCACAGT 854	735 AAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAAAGCAATGCAGAGAT 794	675 AAGGATTGTGCAGAAAGAAAACTGGTTCTCTGCATTTCTGAATGTTCTTCGTCAAACAGG 734	15 AAACCGGATTGCTGCTGCAGAAAACAATGAAATGAATCAGGTGTAAGAGAGAG	41 TCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAGCTGTTGACAATTGAAGACAG 60	TTAGAGAÇGTCTTGGATAAGTGCATGGAGGAGGAACTGTTGACAATTGAAGACAG 61	9	435 TCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCTCTCCATCGTTTGAGAA 494	375 AGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGGAGAACCGGCAGCCC 434	315 AGTCGCCACCTCCGGGAACATGCAGGCAGTTGAACTGCTGCTGAGCACCTTGGAGAAAGGG 374	255 GCCTGTGCTGGACTACCTGACCTTTCTGCCTGCAGAGGTGAAGGAGCAGATTCAGAGGAC 314	195 GAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATGTACATCCAGGTGGA 254	135 TGGGAGAACCCTCTCCCTTCTCTGAGAAAGAAGATGTCGAATGGGTATTCCACAGACGA 134	61 TGGGCAGCGGACAGCGGCACGCACATTTCACCTGTCCCGCAGACAACAGCACCATCTGCT 12

	B &	B 8	B 8	B 8	P 64	B &	B 8	95 QV	g 99	8 8	B 8	B 8	8 8	B 8	8 8	Q Q	D	g &	
•	2235 GCTGGCTGAAAACCCCAGAATATGAAAATGAAAAGCTGACCAAATTAAGAAATACCATAAT 2294 	2175 GGATGAAACAGATAGATTTCTCATGACTTTATTTTTTTGAAAACAATAAAATGTTGAAAAAG 2234 	2115 TGATGATGAGTATTGTGATGGTGATGAAGATGAGGTGATTTTAAAGAAACCTTTTGAAACT 2174 	2055 CTATAATGAAGAGAAAGATAAGAAGTTTTGCAGTCATAGAAGATGATAGTGATGAGGGTGG 2114	1995 GGCCCTACAAATTAATGACACAATTCGAATGATAGATAGA	1935 TGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTGAGGAAGTACAATGA 1994 	1875 AATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAAATGGAAAAAAAA	15 ATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCC 1	1755 AAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCC 1814 	5 ATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAGAAAACCTTGATCAACTGAA 1 	35 TTCACCTGGTGTTGGAGGGGCCACGAAGCAAGCCAAAGCTGAAGAACACATTTTAAAACT 1 	75 TAGACTCAAGAAAGAAAACAAACCAGTGATTCCCCCTTCCTCAGATACTGGGACTAACAGC 1 	1515 CAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAGAAGTTGAAAAACAA 1574 1501 CAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAGAAGTTGAAAAAACAA 1560	55 TGCTGGTGTTCAATTGTCAGACTTTTCCCTCATTATCATTGATGAATGTCATCACCACCAA 1 	1395 TATTATCAGTACAGCTCAAATCCTTGAAAACTCCCTCTTAAACTTGGAAAATGGAGAAGA 1454 	1335 ATTAAGTGGTGATACCCAACTGAAAATATCATTTTCCAGAAGTTGTCAAGTCCTGTGATAT 1394 	5 TGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAAATGGTATCGTGTTATTGG 1		
	g 4	g	9 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	D E	S B \$	S B &	} D !	O B 4	S B 5	B &) B 5	S B 8	₽ &	Db dy	₽ \$) B 5) D (5 B S	
	3315 ATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTACTCT 3364	293 IGHAMAI CIII IMMAINCIAICAGITAAACATTTAATATGATTAATGATTAATGTATTC 3 241 TGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTATGATTAATGTATTC 3	25 TCAACATTTCTAAAAATACTTATTCAGAATGCTGTTTATTTA			AATGATGGTGCACAAAGGCTTAGAATTTTGCCTTGTCTCAAAATAAGGAATTTTTGTAGT 313	941 CAATATGACCCCAGAATTCAAGGAACTTTACATTGTAAGAGAAAACAAAGCACTGCAAAA 300		TGCAGTGTGCTAGCCTGTTCTGGGAAGATATCCATGTAATTGAGAAAATGCATCACGT 2	775 TGCTCATAAGATTTTTGGAATTACAGATGCAAAGTATAATGGAAAAGAAAATAAAACCAA 283 	7.15 C.GAGAGAAGATGATGATGATAAAGCTATACATTGTGTTCAAAATATGAAAACCAGAGGAGTA 7.01 CCGAGAGAAGATGATGATAAAGCTATACATTGTGTTCAAAATATGAAACCAGAGGAGTA		595 CGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGAGCTGATGAGAGCAC	535 CACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTTATCCGTTATGGTCT 259	4 61 TGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAAATAAAT	#15 CARAGECEACCATETIGRAGE EGACACAGEAGTICAGATETECCATIGACACAGAA 246 #10 CAAAGECEACCATETGATTGGAGCTGGACACAGCAGTGAGTTCAAACCCATGACACAGAA 246 #10 CAAAGCCCACCATCTGATTGGAGCTGGACACAGAGCAGTGAGTTCAAACCCATGACACAGAA 246	341 GAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAAATTTTGCTGAAGTAGGAGT	295 GGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTTACAAA	

75 TGGGCAGCGGACAGCACATTTCACCTGTCCCCTICCCTIC

Qy 3255 TGAAGATTCTTTTAAAATACTATCAGTTAAAACATTTAATATGATTAATGTATTC 3314	~	2175 GC	
QY 3195 ATTTCCCAATCTTGACTATTCAGAATGCTGTTTATTTAGTGATGAGGATTAGCACTTGAT 3254	AGTATTGTGATGGTGATGAAGATGAGGATGATTTAAAGAAACCTTTGAAACT 2174	2115 To	
3121 GGTTTTCAAAAATAATTCAACAAAAGAAACAATACAAAAAGTGGGTAGAATTACCTATCAC 3	AAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGATAGTGATGAGGGTGG 2114	2055 CT 2041 CT	
3061 AACAATGATGGTGCACAAAAGCTTAGATTTGCCTTGTCTCAAAATAAGGAATTTTGTAGT 31		8—8 8	
3015 GAAGTGTGCCGACTATCAAATGATGATGAATCATCTGCAAATGTGGCC 	19 19	1935 To 1921 To	
2955 CAATATGACCCCAGAATTCAAGGAACTTTACATTGTAAGAGAAAACAAAGCACTGCAAAA 3	TTTTGGAACTCAACCCTATGAACAATGGGCCATTCAAATGGAAAAAAAA	75 A3	
2895 CIGCAGIGIGCIAGCCIGITCIAGGGAAGAIAICCAIGIAAIIGAGAAAAIGCAICACGI 2	AGAAACTTCTAGAAATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCC 1874	1815 A1 1801 AI	
2835 GAGAAATATIGCCAAGCATIACAAGAATAACCCATCACTAATAACTITCCTITGCAAAAAA 2	AAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCC 1814	1755 AAA 1741 AAA	
2761 TGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAGGAAAATGAAAACCAA 2	CCAATCTTGATGCATTTACTATTAAAACTGTTAAAGAAAACCTTGATCAACTGAA 1754 	1695 ATG 1681 ATG	
2701 C	μ μ	1635 TTC 1621 TTC	
2641 CTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACGTGAGACAGTTAATGATTT	AGAAAGAAAACAAACCAGTGATTCCCCCTTCCTCAGATACTGGGACTAACAGC 1634 	1575 1561	
255 CHICACCANIGAMATAGCCATGGTCCAGGCCGTGGAGCAGAGCTGATGAGAGCAGTTAATCACACTTTAATCACACTTTT 2	CAGTGTATAATAACATCATGAGGCATTATTTGATGCAGAAGTTGAAAAAACAA 1574 	1515 1501	
2521 CACAGTIGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTTATCCGTTATGGTCT 2521 CACAGTIGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTTATCCGTTATGGTCT 2521 CACAGTIGCAGAAGAAGGTCTTGGATATTAAAGAATGTAACATTGTTATCCGTTTATGGTCT 2525 CCTCACACTAAATAACAATTGTAACATTGTTATCAATCAA	TTCAATTGTCAGACTTTTCCCTCATTATCATTGATGAATGTCATCACACACA	1455 1441	
24/3 IGAACAAAAGAAGICAIIAGIAAAIIICGCACIGGAAAAATAAAICIGCITAICGCIAC 2 2461 TGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATAAAT	GTACAGCTCAAATCCTTGAAAACTCCCCTCTTAAACTTGGAAAATGGAGAAGA 1454 	1395 . 1381	
2411 CAANGE CAACCAI CHAIL I GAAGCI GAACACAG CAGIGAGI I CAAACCCAI GACACAGAA 2 [GTGATACCCAACTGAAAATATCATTTCCAGAAGTTGTCAAGTCCTGTGATAT 1394	1335 1321	
2341 GAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAAATGAAAAATTTGCTGAAGTAGGAGT	TCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAAATGGTATCGTGTTATTGG 1334	1275 1261	
2281 GGAGCAATATACTAGGACTGAAGGAATCAGCACGAGGAATAATCTTTACAAAAAACACGACA	AAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAATAAGGTACTGCTAGT 1274	1215 1201	
2221 GCTGGCTGAAAACCCAGAATATGAAAATGAAAAGCTGACCAAAATTAAGAAATACCATAAT 2	GGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAGGATCACTTAGACAA 1214	1155 1141	
2161 GGATGAAACAGATAGATTTCTCATGAAAACTTTATTTTTTGAAAACAATAAAJ	GCCTTACCAAATGGAAGTTGCCCAGCCAGCCTTGGAAGGGAAGAATATCATCATCTGCCT 1154	1095 1081	
	•		

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 11
BC078180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                CONTACT: MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Prepara
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12477932

2 (bases 1 to 2540)

3 Strausberg,R.

Direct Submission

L Submitted (19-JUL-2004) National Institutes of Health Gene Collection (MGC), Cancer Genomics Office, Natior Gene Tratitute, 31 Center Drive, Room 11A03, Bethesda, MD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hominidae; Homo.

1E 1 (bases 1 to 2540)

2S Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,

Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,

Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K.,

Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F.,

Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L.,

Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L.,

Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S.,

Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J.,

Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J.,

McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S.,

Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W.,

Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A.,

Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S.,

Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y.,

Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D.,

Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M.,

Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,

Schnerzh, A., Schein, J.E., Jones, S.J. and Marra, M.A.

Generation and initial analysis of more than 15,000 full-length

human and mouse cDNA sequences

L 2477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens interferon (cDNA clone IMAGE:65027/BC078180 BC078180.1 GI:50415794
Clone distribution:
through the I.M.A.G.
Series: IRAK Plate:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTACTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTATGATTAATGTATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2540 bp mRNA lir interferon induced with helicase IMAGE:6502757), partial cds.
MGC clone distribution
LE. Consortium/LLNL at:
174 Row: p Column: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
ase C do
                               information can be found http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Health, Mammalian
National Cancer
da, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRI 27-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .D.,
                                                                                                                                               밁
                                                                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 2479; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                   296
                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This clone was selected for full length sequenci passed the following selection criteria: matched
                                                                                                                                                                                                                                                                                                TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGCTTCTCTAAGTGGGCAGCGGACAGCGCACATTTCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCGCGCCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCA
                                                                                                                                                                                                       TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACCT
                                                                                           ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCG
                                                                                                                                                                                                                                                                      TACATCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTCTGCCTG
                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE QIQRTVATSGNMQAVELLLSTLEKGVWHLGWTREFVEALRRTGSPLAARYMNPELTDL PSPSFENAHDEYLQLLNLLQPTLVDKLLVRDVLDKCMEEELLTIEDRNRIAAAENNGN ESGVRELLKRIVQKENWFSAFLNVLRQTGNNELVQELTGSDCSESNAEIENLSQVDGP QVEEQLLSTTVQPNLEKEVWGMENNSSESSFADSSVVSESDTSLAEGSVSCLDESLGH NSNMGSDSGTMGSDSDEENVAARASPEPELQLRPYQMEVAQPALEGKNIIICLPTGSG KTRVAVYIAKDHLDKKKKASEPGKVIVLVNKVLLVEQLFRKEFQPFLKKWYRVIGLSG DTQLKISFPEVVKSCDIIISTAQILENSLLNLENGEDAGVQLSDFSLIIIDECHHTNK EAVYNNIMRHYLMQKLKNNRLKKENKPVIPLPQILGLTASPGVGGATKQAKAEEHILK LCANLDAFTIKTVKENLDQLKNQIQEPCKKFAIADATREDPFKEKLLEIMTRIQTYCQ MSPMSDFGTQPYEQWAIQMEKKAAKEGNRKERVCAEHLRKYNEALQINDTIRMIDAYT HLETFYNEEKDKKFAVIEDDSDEGDDDEYCDGDEDDDLKKPLKLDETDRFLMTLFFE NNKMLKRLAENPEYENEKLTKLRNTIMEGYTRTEESARGIIFTKTRQSAYALSQWITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
/product="IFIH1 protein"
/protein_id="AAH78180.1"
/protein_id="AAH78180.1"
/db_xref="GI:50415795"
/db_xref="GeneID:64135"
/db_xref="MIM:606951"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NEKFAEVGVKAHHLIGAGHSSEFKPMTQKKKK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="MIM:606951"
224. .>2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /gene="IFIH1"
/note="synonyms: MDA5, MDA-5,
/db_xref="GeneID:64135"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="IMAGE:6502757"
/tissue_type="Uterus, leiomyosarcoma"
/clone_lib="NIH_MGC_71"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /gene="IFIH1"
/codon_start=:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host="DH10B"
/note="Vector: pCM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Socation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 2476; D
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ng because it
mRNA gi: 27886567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTCCCGCAGACAA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATGTCGAATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGAGCGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGAGCGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2540;
                                                                                                                                                                                                                                                                                                                                                                                     CAGGGTGAAAATG
                                                                                                GGAGGCCCTCCGG 420
                                                                                                                                                        ACTECTECTGAGE
                                                                                                                                                                                                                ACTECTECTEAGE
                                                                                                                                                                                                                                                                                                                                AGAGGTGAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGGTGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GATGTCGAATGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTCCCGCAGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

415

475

300

355

240

235 180 175

295

115

60

B 8

멍

ঠ

망

Ş

1441 GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCATTATCATTGATGAA 1500	TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATTTCCAGAAGTTGTC	261 AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAAATGG 132	1141 ATCATCATCTGCCTCCCTACAGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAG 1200	081 GAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	016 GGAAGTGT 021 GGCACCAT 021 GGCACCAT 076 GGCACCAT	01 TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAG 	841 CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGCATGGAGAATAACTCA 900 896 CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGCATGGAGAATAACTCA 955	81 AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTT 84 	21 CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAA 78 	61 AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTGCATTTCTGAATGTT 72 	01 ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA 66 	41 CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAACT	481 CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCACT 540	
RESULT 12 CQ777379 CQ777379 LOCUS CQ777379 CQ777379 DEFINITION Sequence 1065 from Patent EP1394274. ACCESSION CQ777379	2456 GCTGAAGTAGGAGTCAAAGCCCAC 2461 CCCATGACACAGAATGAACAAAAA	CAAAAACACGACAGAGTGCATATGCGCTTTCCCAGT	Db 2276 AAAATGTTGAAAAGGCTGGCTGAAAACCCAGAATATGAAAATGAAAAGCTGACCAAATTA 2335 Qy 2281 AGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTT 2340	ACCTTTGAAACTGGATGAAACAGATAGAT 	ATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTC GTGATGAGGGTGGTGATGATGAGTATTGTGATGGTGATGA	2036 AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATACT 2041 CATCTTGAAACTTCTATAATGAAGAGAAAGATAAGATTGCAGTCATAGAAGATGAT	QY 1921 ATGGAAAAAAAGCTGCAAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG 1980	1861 TGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA	QY 1801 ACCAGAGAAGATCCATTTAAAGAGAAAACTTCTAGAAATAATGACAAGGATTCAAACTTAT 1860 	QY 1741 CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 1800	QY 1681 CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAGAAAAC 1740 	QY 1621 CTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCCAAAGCTGAAGAA 1680	561 ANGTIGAAAAACAATAGACICAAGAAAGAAAACAAACCAGIGATICCCCCTTCCTCAGATA 	1556 TGTCATCACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAG

§ ₽

र् 밁 밁

Ś

S

멍

8

멍

밁 5 ঠ

밁

멍 Ş 밁 Ş

```
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                              S
S
                                 S
                                                        밁
                                                                         ঠ
                                                                                              엄
                                                                                                           S
                                                                                                                                멍
                                                                                                                                                  ર્
                                                                                                                                                                    g
                                                                                                                                                                                       5
                                                                                                                                                                                                             В
                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 65.5%;
Best Local Similarity 80.7%;
Matches 2609; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                               660
                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                366
                                                                                                                                                                                                                                                                                                                                                                     306
                                                                                                                                                                                                                                                                                                                                                                                                            246
 840
                   846
                                     780
                                                         786
                                                                           720
                                                                                               726
                                                                                                                                     666
                                                                                                                                                                          909
                                                                                                                                                                                                               546
                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                    486
                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                         426
                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                  186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Enammalia; Eutheria; Euarchontoglires; Glires; Rodentii Sciurognathi; Muroidea; Muridae; Murinae; Mus.

1
Ohtani, N., Sugita, Y., Yamaya, M., Kubo, H., Nagai, H. and Methods of testing for bronchial asthma or chronic objections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pulmonary disease
Patent: EP 1394274-A 1065 03-MAR-2004;
Genox Research, Inc. (JP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CQ777379
                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGAACCGGCAGCCCTCTGGCCCGCCCTACATGAACCCCTGAGCTCACGGACTTGCCCCTC
                                                                                                                                                                                                                                                                                                                                           TCTGGTGGACAAGCTTCTAGTTAGAGAGACGTCTTGGATAAGTGCATGGAGGAGGAACTGTT
                                                                                                                                                                                                                                                     CACCTTGGAGCAGGGACAATGGCCTCTGGGATGGACGCAGATGTTCGTGGAGGCCCTAGA
                                                                                                                                                                                                                                                                                                      CACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCG
                                                                                                                                                                                                                                                                                                                                                                      AAGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACT
                                                                                               GACAG
                                                                                                                                              GACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGT
                                                                                                                                                                         TTTGGTGGACAAACTTCTGATTAACGATGTCTTGGACACTTGCTTCGAGAAGGGACTATT
                                                                                                                                                                                                                rectricerendadactoccardaceaerererecaerricerendecereceaeceae
                                                                                                                                                                                                                          TCCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCAC
                                                                                                                                                                                                                                                                                                                                GCAGATTCTTAAAAAGATCAACACCTGTGGTAACACCAGCGCGGCAGAACTGCTGAG
TCTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGGCATGGAGAATAACTC
                    AGACAACACAGACTTGGCTAACTCGTCTCACAGAGATGGGCCTGCAGCTAATGAGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Mus musculus"
/mol_type="unassigned DNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1. .3771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:45380363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 2202.4;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       616;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Izuhara, obstructive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                  539
                                                                                                                                                                                                                                                                                                                                                   359
                                                                            779
                                                                                                                                                                                             599
                                                                                                                                                                                                                                                     545
                                                                                                                                                                                                                                                                        479
                                                                                                                                                                                                                                                                                            485
                                                                                                                                                                                                                                                                                                                                 425
                                                                                                                                                                                                                                                                                                                                                                        365
                                                                                                                                                                                                                                                                                                                                                                                                                                                   245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    179
  668
                     905
                                       839
                                                          845
                                                                                                785
                                                                                                                  719
                                                                                                                                      725
                                                                                                                                                        659
                                                                                                                                                                            665
                                                                                                                                                                                                                509
                                                                                                                                                                                                                                                                                                                                                                                         299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                               5 B
                                                                                                                      S
                                                                                                                                             장점
                                                                                                                                                                                                 5
                                                                                                                                                                                                                        뫄
                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                     日
                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                뭕
                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
           S
                              뫄
                                         ্হ
                                                              뫄
                                                                                                          1806
                                                                                                                                                                                                                         1626
                                                                                                                                                                                                                                                                                  1497
                                                                                                                                                                                                                                                                                                     1506
                                                                                                                                                                                                                                                                                                                       1437
                                                                                                                                                                                                                                                                                                                                           1446
                                                                                                                                                                                                                                                                                                                                                             1377
                                                                                                                                                                                                                                                                                                                                                                                 1386
                                                                                                                                                                                                                                                                                                                                                                                                   1317
                                                                                                                                                                                                                                                                                                                                                                                                                      1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1026
            1917
                                                1857
                                                                     1866
                                                                                       1797
                                                                                                                            1737
                                                                                                                                                1746
                                                                                                                                                                  1677
                                                                                                                                                                                    1686
                                                                                                                                                                                                        1617
                                                                                                                                                                                                                                             1557
                                                                                                                                                                                                                                                              1566
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         900
                                                                                                                                                                                                                         TGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                              ATGGTATCGTGTTATTGGATTAAGTGGTGATACCCCAACTGAAAATAT
                                                                                                                                                                                                                                                                                                                                                                                                                     CAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAAATGGAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTG
                                                                   TGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGI
                                                                                                         GAATCTTGGTCAACTCAAACACCAAATAAAGGAACCATGCAAGAAA
                                                                                                                                              AGAACACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTI
                                                                                                                                                                                           GATACTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAG
                                                                                                                                                                                                                                                                                                               CTTGGAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAAGGATCACTTAGACAAGAAGAAAAAAAGCATCTGAGCCTGGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGGCACCATGGGAAGTGATTCAGATGAA---GAGAATGTGGCAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCAGAGGCTTCTTGTACAGATTCGTCTGTGACCACAGAATCAGAC
                                                                                                                     AAACCTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAG
                                                                                                                                                                                     GATACTAGGACTGACAGCTTCACCTGGTGTTGGAGCAGCCAAAAAAG
                                                                                                                                                                                                                                                                                                      TCTGGAGAGTGGAGACGATGACGGTGTGCAGCTGTCAGACTTCTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCAGAATCATCTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACI
                                                                                                                                                                                                                                                                 TGAGTGCCATCACCAACAAGGAGGCAGTCTATAACAACATCATG
                                                                                                                                                                                                                                                                          TGAATGTCATCACACCAACAAAGAAGCAGTGTATAATAACATCATGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAATATTATTATCTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ĠĊĊĂĠĂĂĊĬĠĊĀĠĊĬĊĀĠĠĊĊĬĬĂĊĊĂĂĂĬĠĠŖĀĠĬĠĠĊĊĊŖĄĊĊŖ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGCACCATGGGAAGTGATTCAGATGAAAGTGTCATCCAGACAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGAAGTGTCAGCTGCTTCGATGAAAGTCTTGGACATAACAGCAAC
                                        TTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTAT(
                                                                     ACAAGGATTCAAAC 1856
|||| |||| ||
GCAAGCATTCAGAC 1925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | || | | |
TAGACGACATATT
                                                                                                                                                 AAAACAGTGAAAGA 1805
                                                                                                                                                                                                                          ACTCCCTCTTAAA 1436
                                                                                                                                                                                                                                                                                                                                                                                                                      CATATTTGAAGAA 1385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAAGTTTGGCAGA 959
                                                                                                                                                                   AAACTGTTAAAGA 1736
                                                                                                                                                                                                         AAGCCAAAGCTGA 1676
                                                                                                                                                                                                                                                                 GACGATATTTGAA 1625
                                                                                                                                                                                                                                                                            GGCATTATTTGAT 1556
                                                                                                                                                                                                                                                                                                     TCATTATCATTGA 1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTTGGAAGGGAA 1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGGCAGTGATTC 1019
 TTTGTGCAGAACA 1976
                                 AGCAGTGGGCCAT 1985
                                                                                                            TTGTGATTGCTGA 1865
                                                                                                                                                                                                                                                                                                                                            ACTOCOTOTTANA 1505
                                                                                                                                                                                                                                                                                                                                                                                 CATTTCCAGAAGT 1445
                                                                                                                                                                                                                                                                                                                                                                                             CATTTCCAGAAGT 1376
                                                                                                                                                                                                                                                                                                                                                                                                                                  CATTTTTGAAGAA 1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTATCGTTCTTGT 1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTATAGTTCTTGT 1256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGTATCCCCCGA 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGCATCCCCGGA 1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGGCAGGGATTC 1085
                                                                                                                                                                                     AGTCTGAGGCTGA 1745
                                                                                                                       TTGCCATTGCAGA 1796
                                             AACAATGGGCCAT 1916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTTTACATTGC 1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTTTACATCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1265
```

밁

ACCAGAATTCAAGGGACTCTACATTGTAAGAG ACCAGAATTCAAGGGACTCTACATTGTAAGAG GGACTATCAAATAAATGGTGAAATCATCTGCA	3. 3.
7 AACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGT	
17 AAAGAAAATGAAAAACCAAGAAAATATTTGCCAAGCATTA 	28 8
57 TATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAA	27 28
97 TGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAA 	26 27
37 CAGA(03 CAGA(26 27
77 TGTT/ 43 TGTT/	. 25
17 CAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGT	25 25
57 CAAACCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAA 	
97 ATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACACAC	
37 CTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCCAGTGGATTACTGAAAATGAAAA	23
77 ATTAÀGA 43 ATTAAGA	2 2 2 2 3
7 CAATAAA 3 CAAGAAA	
57 AAAGAAA 23 AAAGAAA	
97 TGATAGT 63 TGACAGO	
37 TACTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGA 2 	20 21
77 TTTGAGG	19 20
86 TCAAATG	19

음 성

8 8 8 8 8

β δ 유정

S

멍

유정

음 성 음 성 음

Ś

밁

밁

S

유 8 B 8 B 8 B 8

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
AF374384
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DExh y---
Unpublished

E 2 (bases 1 to 3771)
S Kang, D.-C. and Fisher, P.B.
Direct Submission
AL Submitted (26-APR-2001) Urology, Columbia University, P f
West 168th, New York, NY 10032, USA
Location/Qualifiers
1771

1771

1771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AF374384 3771 bp mRNA linear ROD 02-MAY-2002 Mus musculus strain C57BL/6J melanoma differentiation associated gene 5-like protein mRNA, complete cds.
AF374384 AF374384.1 GI:20385627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrat Mammalia; Eutheria; Euarchontoglires; Glires; Rod Sciurognathi; Muroidea; Muridae; Murinae; Mus. 1 (bases 1 to 3771)
Kang, D.-C. and Fisher, P.B.
Kung, D.-C. and Fisher, P.B.
Murine homolog of melanoma differentiaion associa DEXI group RNA dependent ATPase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGTTTAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTTAATTGTTGTTTTCGCTACACTACTGAGCTAACTCTAGAATATGTAGA 3414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTATGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAA 3348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAAGATTAGCACTTGATTCATGATTATTTTAAAATACTGCCAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAGGATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATAAGGAATTTTGTAGTCAATTTCAAAAATAACTCACCGAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTGGAATTGCCTATCAGATTTCCTGATCTTGACTACTCAGAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAA(
protein"
/protein_id="AAM21359.1"
/protein_id="AAM21359.1"
/protein_id="AAM21359.1"
/db_xref="GI:20385628"
/translation="MSIVCSABSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSABSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSABSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSABSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSINGROUNDILFEASTONE"
PSPSSETAHDECLHLITLLQPTLVDKLLINDVLDTCFEKGLLTVEDRNRISAAGNSGN
ESGVRELLRRIVQKENWFSTFLDVLRQTGNDALFQELTGGGCPEDNTDLANSSHRDGP
ESGVRELLPAVDESSLETEAWNVDDILPEASCTDSSVTTESDTSLAEGSVSCFDESLGH
NSNMGRDSGTMGSDSDESVIQTKRVSPEELQLRPYQMEVAQPALDGKNIIICLPTGS
GKTRVAVYITKDHLDKKKQASESGKVIVLVNKVMLAEQLFRKEFNPYLKKWYRIIGLS
GKTRVAVYITKDHLDKKKQASESGKVIVLVNKVMLAEQLFRKEFNPYLKKWYRIIGLS
GDTQLKISFPEVVKSYDVIISTAQILENSLLNLESGDDDGVQLSDFSLIIIDECHHTN
KEAVYNNIMRRYLKQKLRNUDLKKQNKPAIPLPQILGLTASPGVGAAKKQSEAEKHIL
NICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLEIMASIQTYC
QKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEALQINDTIRMIDAY
SHLEAFYTDEKEKKFAVLNDSDKSDDASSCNDQLKGDVKKSLKLDETDEFLMNLFFD
NKKMLKKLAENPKYENEKLIKLRNTILEQFTRSEESSRGIIFTKTTQSTYALSQWIME
NKKMLKKLAENPKYENEKLIKLRNTILEQFTRSEESSRGIIFTKTTQETNALSQWIME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:10090"
235. .3312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="RNA-dependent ATPase;
115954.50 Da"
                                                                                                                                                                                                                                                                                                                                                                                                   /codon_start=1
/product="melanoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                    differentiation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                associated gene-5
                                                                                                                                                                                                                                                                                                                                                                                                   associated gene 5-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     molecular weight:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCCTTGTCTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTTGTATAGTGA 3302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCCTTGTCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACATTGAATATG 3362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACATTTAATATG 3296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTACAAGAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATACAAAAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ש
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ູດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3182
```

9	Qy db	Db Q	Оγ	Db Qy	Db Qy	Qy	Db Qy	Db &	o b Qy	ОУ	D Q	D 8	Дb	Qy Db	tch ery	mis pol ORIGIN	mis
960 AGGAAG	900 ATCA 966 ACCA	840 TCTTT 906 TCTGC	780 AAGC 846 AGAC	720 TCTTC	660 AAGA 726 AAGA	600 GACAA 666 GACAG	540 TCTG 606 TTTG	480 TCCA	86	360 CACC	300 GCAGATT 366 GCAGATT	240 GTAC 306 GTAC	180 GTATTC - 246 CTGTTC	121 CAGC	Match ocal Simil s 2609; C	c_feature lyA_signal	3c_feature
AGTGTCAGCTGC	AGAATCATCTTT AGAGGCTTCTTG	TTTCAACCACAGT	AATGCAGAGAT	rcgtcaaacaggaaa 3cgccaaactggaaa	aagagagctactaaa aagagagctgctgag	TTGAAGAC TCGAAGAC	TCTGGTGGACAAGCTTCTAGTT. 	CATCETTTGAGAACGCT 	ACCGGCAGCCC	TTGGAGAAGGC TTGGAGCAGGC	ATTCAGAGGAC ATTCTTAAAAA	CATCCAGGTGGA CATTCAGGTGGA	TATTCCACAGACGA TGTTCTGCAGAGGA	CACCATCTGCTT	65. larity 80. Conservative		KECNIVIR AINRVQNM CSGENIHV VHKGLDLP 12281
CTTAGATGAAAG	TGCAGATTCT TACAGATTCG	년 - 년	AGATTGAGAATTTATCACA 	CAATGAA TGATGCA	AAGGATTGTG ;AAGGATTGTG	CAGAAACCGGATTGCTGCTGCAGAAAAC 	AAGCTTCTAGTTAGAGACG AAACTTCTGATTAACGATG	CATCGTITGAGAACGCTCATGATGAGAGTGTCTCCACTTGCTGAC	AACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCA	CTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTG 	AGTCGCCACC GATCAACACC	GTACATCCAGGTGGAGCCTGTGCTGGACCTACCTTT 	CACAGACGAGAATTTCCGCTATCTCATCTCG TGCAGAGGACAGCTTCAGGAATCTCATCTTA	CACCATCTGCTTGGGAGAACCCTCTCCC-	5%; Score 7%; Pred. 0; Mi	75 XH helica 60	RYGLVTNEIAM MKPEEYAHKILI VIEKMHHVNMTI PCLKIRNFVVNI 1245
TCTTGGACF	TCTGTAGTTTC CTGTGACCAC	AGCCAAATCTGGAGAAGGAGGTCTG 	U ≽	CTTGTCCAAGAGTTAACAGGC CTATTCCAAGAACTAACAGGT	CAGAAAGAAAA CAGAAGGAAAA	GCTGCTGCAGA	7—7	SAGTGTCTCCA	CGCTACATGAA	CTTGGTTGGAC CTGGGATGGAC	rccgggaacat rgtggtaacac	JACTACCTGAC JACCACCTCAT	PATCTCATCTC	CTCCC-TTCT	2202.4; D No. 0; smatches 6	8,1	/QARGRARADE 3LQVQSILEKK 9EFKGLYIVRE 9KNNSPKKQYK
raacagcaac	AGAATCAGAC AGAATCAGAC	GGGC 	TGGTCC	GTTAACAGGC	AACTGGTTCTCTG AACTGGTTTTCTA	AAACAATGGAJ AAACAGCGGGJ	TCTTGGATAAGTGCATGGA CTTGGACACTTGCTTCGA	ACTECTEAAC	ACCCACACTO	TCGGGAATTCC 	GCAGGCAGTT(CAGCGCGGCA(CTTTCTGCCTO		TTCTCTGAGAAAGAAAGA TTTCCTGAGACCTCACGA	B 9; Lengt 16; Indels	e; unclassi	STYVLVTSSG! MKVKRSIAKQ! NKALQKKFAD! KWVELPIRFP!
TGGGCAGTG	ACAAGTTTGGC ACAAGTTTGGC	ATGGAGAATAACTC GTAGACGACATATT	TCAAGTGGAAGAGCAACT 	CTCTGATTGCTCAG TGGAGGCTGCCCAG	TAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTGCATTTCTGAATG 	agaaaccggattgctgctgcagaaaacaatggaaatgaatcaggtg 	GGAGGAAC GAAGGGAC	CATGATGAATATCTCCAACTGCTGAACCTCCTCCAGCCCATGATGACGAGCGAG	CGGACTTGCC	GAGGCC GAGGCC	CAGAGGACAGTCGCCACCTCCGGGAACATGCAGGCAGTTGAACTGCTGCTGAG	CTACCTGACCTTTCTGCCTGCAGAGGTGAAGGA 	TCGTGCTTCAGGGCCAGGGTGAAAAT 	TGTCGAA TGTCGAT	h 3771; 7; Ga	[fied site"	KECNIVIRYGLVTNEIAMVQARGRARADESTYVLVTSSGSGVTEREIVNDFREKMMYKAINRVQNMKPEEYAHKILELQVQSILEKKMKVKRSIAKQYNDNPSLITLLCKNCSMLVCSGENIHVIEKMHHVNMTPEFKGLYIVRENKALQKKFADYQTNGEIICKCGQAWGTMMVHKGLDLPCLKIRNFVVNFKNNSPKKQYKKWVELPIRFPDLDYSEYCLYSDED"12281245
ATTC 1019	CAGA 959 CAGA 1025	CTC 899 - ATT 965	ACT 839 TCT 905	AGA 779 AGA 845	TGT 719 TGT 785	TGT 659 TGT 725	TGTT 599 TATT 665	CAC 605	C - C - 47	CTCCG 419 CTAGA 485	GAG 359 GAG 425	GGA 299 AGA 365	AAT 239 AAT 305	TGG 179 	рв 3;		FREKMMYK CKNCSMLV GQAWGTMM DED"
																	
Db 5) B \$	D B 1	S B 8	8 8 8	, B &	} B &	B 7	ov B	S DB	S B	A B	Ş ₽ ;	Q B 4	\$ B &	S B 8	Db Qy	Db Qy Db
106	046	986 T 977 T	926 T 917 T	1866 TGAC	806	746	686	1626 GCAC	1566 TGAC	506 497	446	386	26	266 0	137 G 206 G	1077 GCC# 1146 GCC#	0, 0, 0,
TAGCCACCTGGAGG	TTTGAGGAAGTACA	 .ATGGAGAAAA ;AGGAAGTACA	TCAAATGGAAAAAA	HCCAGAGAAG	CTTGGTCAAC	AAAACATATTTTAAATATATATGTGC	GATACTAGGACTGACAGCTTCAC	AAGCTGAGAA CTGGGACTAA		 GAGAGTGGAG TGTCATCACA	 AAATCTTACG GAAAATGGAG	 TATCGAATTA AAGTCCTGTG		GATCACTTAG	ATCATCATCT	GAACTCCAGC GAACTGCAGC	AGTGTCAGCTV ACCATGGGAAV ACCATGGGAAV
TGGAGGCATTCTACACT	TACAACGAAGCCCTACA		AAAAAAGTCCAATGTCAGATTTTGGAACCCAA	TGCAACCAGAAGATCCATTTAAAGAGAAACTTCTAG 	CANTELLIANI CARCITATA AND AND AND AND AND AND AND AND AND AN	ATATATGTGCC		ACAATGACCTC	TGAGTGCCATCACACAACAAGGAGGCAGTCTATAACAACATCATGAGACGATATTTGAA GCAGAAGTTGAAAAACAAACAAACAACAACAACATCCCCTTCCTCA GCAGAAGTTGAAAAAACAAATAGACTCAAGAAAAGAA				TGGTATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATAT	ANGENT COCTACE TO CONTROL TO CONT	GAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGG 	CCAGAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	AGGAAGTGTCAGCTGCTTCGATGAAAGTCTTGGACATAACAGCAACATGGGCAGGGATTC AGGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAGCATCCCCGGA
CTGATGAGAAAGAAAAGAAGTTCGCAGTCCT		 \GACGGAAATC	GATTTTGGAA	GAGAAACTTC	MIAAAGGAAC	CAATCTTGATGCCTTTACC		AAGAAACAAA GGTGTTGGAG	 GCAGTCTATA AGAAAGAAA	 GTGCAGCTGT GCAGTGTATA	 AGCACTGCTC	 GGCGATACCC AGTACAGCTC	GGTGATACCC	CAGGCATCTG	ABACCATCTG	CAAATGGAAG CAAATGGAAG	AGTCTTGGAC. 'GAA GAGA 'GAAAGTGTCA'
 AAAAGAAGTT	BAGAGAAACGACGATCCGAATG	 GCAAAGATTCG ACACAATTCG	 CCCAACATTA GCAAAGAACG		CATGCAAGAA	COTTACCAT	 CAGCCAAAAA CATTTACTTATT	ACAAACCAGC	 ACAACATCAT(ACAAACCAGT(AAATCCTTGA	 AGCTGAAAAT; AAATCCTTGA	 AAGAGTTCAA AACTGAAAAT	AATCCGGGAAG	AAACCAGAGTO	TTGCCCAGCC	ATAACAGCAA ATGTGGCAGCI TCCAGACAAA
CGCAGTCCTCAA	ARTGATTGATGCATA	 CGTCTGTGCAC AATGATAGATC		 GGCAAGCATTCAGAC	CAAGAAATTTGTGATTGCTGA 1	CATTAAAACAGTGAAAGA	 CAGTCTGAGGCTGA TAAAACTGTTAAAGA	CATTCCCCTGO GCAAGCCAAAO	GAGACGATATTTGAA GATTCCCCTTCCTCA	 TCTCATTATCATTGA GAGGCATTATTTGAT	 AAACTCCCTCI		TCATTTCCAGAAGT	GITTATCGTTCTTGT		3–5	CATGGGCAGGG NAGAGCATCCC
-CAA	CATA	 3AACA 2045 3CGTA 2036	 CCAT 1985 SAACA 1976	CAGAC 1925		J 69 -		CCGCA 1685	TTGAA 1625 CTCA 1616		\vdash		 NAGAA 1385 BAAGT 1376	,	ATTGC 1196 		3ATTC 1085 CCGGA 1076

В

S

밁

```
2997
                                                                                                                                                                                                                                                                                                                                                            2943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2097
                                                                                                           ATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAGAAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCATCACTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATGAAACCAGAGGAGTATGCACATAAGATTTTGGAATTGCAGGTGCAAAGTATCCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGATTGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATTAACCGTGTTCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAATAAAATGTTGAAAAAGGCTGGCTGAAAAACCCAGAATATGAAAATGAAAAAGCTGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAGAAACCTTTGAAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAAA
                                                                                                                                                                                                                                                                                               TGAGAAAATGCATCACGTCAATATGACCCCCAGAATTCAAGGAACTTTACATTGTAAGAGA
                                                                                                                                                                                                                                                                                                                                                                                       AACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAGAAAATGAAAGTCAAAAGAAGCATTGCAAAGCAATACAACGACAATCCATCGTTAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATGAAACCAGAGGAGTATGCTCATAAGATTTTTGGAATTTACAGATGCAAAGTATAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGACAGTTAATGATTTCCGAGAGAAGATGATGTTATAAAGCTATACATTGTGTTCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAACCCATGACACAGAATGAACAAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTGCTGAAGTAGGAGTCAAAGCCCCACCATCTGATTTGGAGCTGGACACAGCAGCAGTGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAGAAATCTTTGAAACTGGACGAAACGGATGAATTTCTCATGAATTTGTTCTTTGATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGACAGCGACAAGAGTGATGACGAGGCCAGCAGTTGCAATGACCAACTTAAGGGCGATGT
                                      AATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATACAAAAAGTG
                                                                                                                                                                                AAACAAAGCACTGCAAAAGAAATTTGCTGATTATCAGACCAATGGAGAGATTATCTGCAA
                                                                                                                                                                                                            TGAGAAGATGCATCATGTCAATATGACACCAGAATTCAAGGGACTCTACA
                                                                                                                                                                                                                                                                                                                                                              AACACTTCTCTGCAAAAATTGTAGCATGCTGGTCTGCTCGGGAGAAAACATCCATGTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAAGCCCATGACTCAGACTGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGCGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTTACAAAAACACGACAGAGCACCTACGCACTTTCCCCAGTGGATCATGGAAAATGCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTTACAAAAACACGACAGAGTGCATATGCGCCTTTCCCAGTGGATTACTGAAAATGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ATTAAGAAACACGATACTGGAACAATTCACAAGGTCTGAGGAGTCCTCCCGAGGAATTAT</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAAGAAATGTTGAAAAAACTAGCTGAAAACCCAAAATACGAGAATGAAAAACTCATTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FCAAAGCGCATCACCTGATTGGCGCGGGGCACAGCAGTGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTGGTCACCAGCAGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGAGTTACCGAACG
TACAAGAAGTG
                                                                                                                                                                                                                                                                    TTGTAAGAGA
                                        3176
                                                                                                                                                                                3122
                                                                                                                                                                                                                      3056
                                                                                                                                                                                                                                                                      3062
                                                                                                                                                                                                                                                                                                                  2996
                                                                                                                                                                                                                                                                                                                                                            3002
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2156
```

ફ

멍 S

S

밁

S

169 ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCTC

Query Match Best Local Sim Matches 2504;

Similarity

63.5%;

Score 2135.4; Pred. No. 0; 0; Mismatches

2135.4; No. 0;

Leng

끍

Conservative

<u>.</u>

571; DΒ

COTGCTTCAGGGCC 228

6; Gaps

2;

멂 र् 밁 Ş 밁 ঠ 뮹 В S 밁 S 밁 5 日 5 9 S 5

В

В Ś В र् 밁 ঠ 밁 S

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 14
AY075132
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           र्ठ
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AY075132
Mus musculus 1
AY075132
AY075132.1 G:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
Submitted (24-JAN-2002) Biochemistry, U
des Boveresses 155, Epalinges, VD 1066,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and Tschopp, J.

Overexpression of Helicard, a CARD-Containing during Apoptosis, Accelerates DNA Degradation Curr. Biol. 12 (10), 838-843 (2002)

12015121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kovacsovics, M., Martinon, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrat
Mammalia; Eutheria; Euarchontoglires; Glires; Roc
Sciurognathi; Muroidea; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kovacsovics, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 3078) vacsovics, M., Hofmann, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTATGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGGATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGC:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGTGGAATTGCCTATCAGATTTCCTGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTTTAATTGTTTTTCGCTACACTACTGAGCTAACTCTAGAATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 3078)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Boveresses 155, Epalinges,
Location/Qualifiers
            QILKKINTCGNTSAAELLLSTLEQGWPLGWTQMFVEALEHSGNPLAARYVKPTLTDL
PSPSSETAHDECLHLLTLLQPTLVDKLLINDVLDTCFEKGLLTVEDRNRISAAGNSGN
ESGVRELLRRIVQKENWFSTFLDVLRQTGNDALPQELTGGGCPEDNTDLANSSHRDGP
AANECLLPAVDESSLETEAWNVDDILPEASCTDSSVTTESDTSLAEGSVSCFDESLGH
NSNMGRDSGTMGSDSDESVIQTKRVSPEPELQLRPYQMEVAQPALDGKNIICLPTGS
GKTRVAVYITKDHLDKKKQASESGKVIVLVNKVMLAEQLFRKEFNPYLKKWYRIIGLS
GDTQLKISFPEVVKSYDVIISTAQILENSLLNLESGDDDGVQLSDFSLIIIDECHHTN
KEAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPQILGLTASPGVGAAKKQSEAEKHIL
NICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLEIMASIQTYC
QKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEÄLQINDTIRNIDAY
SHLETFYTDEKEKKFAVLNDSDKSDDEASSCNDQLKGDVKXSLKLDETDEFLMNLFFD
NKKMLKKLAENPKYENEKLIKLRNTILEQFTRSEESSRGIIFTKTRQSTYALSQWIME
NAKFAEVGVKAHHLIGAGHSSEVKPMTQTEQKEVISKFRTGEINLLIATTVAEEGLDI
KECNIVIRYGLVTNEIAMVQARGRARADESTYVLVTSSGSGVTEREIVNDFREKMMYK
AINRVQNMKPEEYAHKILELQVQSILEKKMKVKRSIAKQYNDNPSLITLLCKNCSMLV
CSGENIHVIEXMHVVNMTPEFKGLYIVRENKALQKKFADYQTNGEIICKCGQAWGTMM
VHKGLDLPCLKIRNFVVNFKNNSPKKQYKKWVELPIRFPDLDYSEYCLYSDED"
                                                                                                                                                                                                                                                                                                                                                       /protein_id="AAL77205.1"
/db_xref="GI:18698981"
/translation="MSIVCSAEDSFRNLILFFRPRLKMY!
                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
/product="HELICARD"
                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="helicase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .3078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:18698980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3078
HELICARD mRNA, (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                id="AAL77205.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          contains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and Tschopp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp mRNA complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Micheau, O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            two
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  University
5, Switzerl
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bodmer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            doma:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J:L., Hofmann,K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of Lausanne,
and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            licase Cleaved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           :a; Euteleostomi;
lentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IGTAGA 3414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATAAA 3348
                                                                                                                                                                                                                                                                                                                                                        QVEPVLDHLIFLSAETKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACATTGAATATG 3362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACATTTAATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTATTTAGTGA 3236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ROD 20-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Сþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3302
```

Ş	da	Ş Ş	F &	D Qy	g Q	g Qy	문왕	g Q	g Q	D 64	Qy Oy	g Qy	g &	Qу	Db Qy	Db Qy	P Q	д	Db
1246 ATAGTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCA 1305	021 GTTTACATCACCAAAGATCACTTAGACAAGAAGAAGCAGCATCTGAATCCGGGAAGGTT 10	6 GTTTACATTGCCAAGGATCACTTAGACAAGAAAAAAAAAA	1126 TTGGAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAAACCCAGAGTGGCT 1185 	1066 GCATCCCCGGAGCCAGAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	09 GGCAGTGATTCAGGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGA 1 	949 AGTTTGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATG 1008 	0—0	829 GAAGAGCAACTTCTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGAGGTCTGGGGGCATG 888	769 GATTGCTCAGAAAGCAATGCAGAGATTGAGAAATTTATCACAAGTTGATGGTCCTCAAGTG 828 	6 7	49 GAATCAGGTGTAAGAGAGCTACTAAAAAGGATTGTGCAGAAAGAA	89 GAGGAACTGTTGACAATTGAAGACAGAA 	529 CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAG 588 	69 GACTTGCCCTCTCCATCGTTTGAGAACG	09 GAGGCCCTCCGGA	49 CTGCTGCTGAGCACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGG	289 GAGGTGAAGGAGCAGATTCAGAGGACAGTCGCCACCTCCGGGAACATGCAGGCAG	AGGGTGAAAATGTACATCCAGGTGGAGCCTGTGCT	
															-		_		
B .	§	ş Q	B 4	ρ Β	O B	Q B	Q B :	D B 4	Q B 4	₽ B 1	Ş ₽ #	S B 8	D B \$, B &	₽ B 1	S B &	\$ B &	B &	d d
58 CGAGGAATTATTTTTACAAAAACACGACAGAGCACCTACGCACTTTCCCAGTGGATCATG 221	326 CGAGGAATAATCTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACT 238	2266 AAGCTGACCAAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCA 2325	038 TTCTTTGATAACAAGAAAATGTTGAAAAAACTAGCTGAAAACCCAAAATACGAGAATGAA			961 ATT		966 TGTGCAGAACATTTGAGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATG 2	906 CANTGGGCATTCAANTGGAAAAAAAGTCCAATGTCAAAAAAGGAAATCGCAAAGAACGTGTT			726 ACTGTTAAAGAAAACCTTGATCAACTGAAAAAACCAAATACAGGAGCCATGCAAGAAGTTT 1		381 CGATATTTGAAGCAGAAGCTGAGAAACAATGACCTCAAGAAACAAAC			201 TTT	306 TITTIGAAGAAAIGGIATIGIGIATIGAAITAAGIGGIGATAACCCAACIGAAAAIAICA 1	081 ATCGTTCTTGTCAATAAGGTAATGTTAGCAGAACAACTTTTCCGAAAAGAGTTCAACCCA 1

```
RESULT 15
BC080200
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                         S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ਰ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                            SOURCE
ORGANISM
                                                                       KEYWORDS
                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                       BC080200
BC080200.1
MGC.
                        BuM
                                                                                                                                           BC080200 3635 bp mRNA linear Mus musculus interferon induced with helicase C do: (cDNA clone MGC:90959 IMAGE:3597815), complete cds
                                                                                                                                                                                                                                                                                                                                                                                                                                            TACAAAAAGTGGGTAGAATTACCTATCACATTTTCCCAATCTTGACTATTCAGAATGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAATGTAACATTGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAAATGAAAATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACAC
                                                                                                                                                                                                                                                                                                                  TTGTATAGTGATGAAGATTAG
                                                                                                                                                                                                                                                                                                                                              TTATTTAGTGATGAGGATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                TACAAGAAGTGGGTGGAATTGCCTATCAGATTTCCTGATCTTGACTACTCAGAATACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTTGTCTTAAAATAAGGAATTTTGTAGTCAATTTCAAAAATAACTCACCGAAGAAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTATCTGCAAGTGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGTTTAGATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGTAAGAGAAAACAAAGCACTGCAAAAGAAATTTGCTGATTATCAGACCAATGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCATCGTTAATAACACTTCTCTGCAAAAATTGTAGCATGCTGGTCTGCTCGGGAGAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCATCACTAATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTATCCTGGAAAAGAAATGAAAGTCAAAAGAAGCATTGCAAAGCAATACAACGACAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTATAATGGAAAAGAAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTGTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGTGGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAAATGCAAAGTTTGCCGAAGTTGGAGTCAAAGCCGCATCACCTGATTGGCGCGCGGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCCATGTCATTGAGAAGATGCATCATGTCAATATGACACCAGAATTCAAGGGACTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCCATGTAATTGAGAAAATGCATCACGTCAATATGACCCCCAGAATTCAAGGAACTTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CGGGGTCGAGCCAGAGCTGATGAAAGCACGTATGTCCTGGTCACCAGCAGTGGCTCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGGCGAAATAAATCTGCTTATCGCTACGACGGTGGCAGAGGAAGGCCTGGATATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTGGAAAAATCAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAGTGAAGTCAAGCCCATGACTCAGACTGAACAAAAAGAAGTCATTAGTAAATTTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAGTGAGTTCAAACCCATGACACAGAATGAACAAAAAAGAAGTCATTAGTAAATTTCGC
                        musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAAAACATGAAACCAGAGGAGTATGCACATAAGATTTTGGAATTGCAGGTGCAA
 Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                               GI:51329783
                                                                                                                                                                                                                                                                                                                  3078
                                                                                                                                                               domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2925
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E 1 (bases 1 to 3635)

ES Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsieh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
cDNA Library Preparation: Life Technologies, Inc. cDNA Library Preparation: Life Technologies, Inc. cDNA Library Preparation: Life Technologies, Inc. cDNA Sequencing by: National Institutes of Health Int:
Sequencing Center (NISC),
Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjan Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghigh Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D.,N McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Voung,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                          Clone distribution: MGC clone distribution inform through the I.M.A.G.E. Consortium/LLNL at: http:/Series: IRAK Plate: 177 Row: a Column: 11
This clone was selected for full length sequencing passed the following selection criteria: matched location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
Submitted (16-AUG-2004) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Proc. Nat
12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Director MGC Project.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             human and mouse cDNA sequences
Proc. Natl. Acad. Sci. U.S.A. S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria; Euarchontoglires; Glires; Sciurognathi; Muroidea; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 3635)
                                                                                                                                                                                                                                       /mol_type="mRNA"
/strain="FVB/N"
/db_xref-"-
                                                                                        /tissue_type="Mammary tumor.ductal carcinoma. 5 month ol./clone_lib="NCI_CGAP_Mam6"
/lab_host="DH10B"
/note="Vector: pCMV-SPORT6"
/gene="Ifih1"
/note="synonyms: Helicard,
/db_xref="GeneID:71586"
                                                                                                                                                                                                                                                                                                                                         1. .3635
                                                                                                                                                                                                              db_xref="taxon:10090"
/clone="MGC:90959 IMAGE:3597815"
                                                                                                                                                                                                                                                                                                              organism="Mus
                                                                         .3635
                                                                                                                                                                                                                                                                                                              musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99 (26), 16899-169
                                                                                                                                                                   old virgin
                            MDA5
                                                                                                                                                                                                                                                                                                                                                                                                                                                         information can be found http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M., Benjamin, B.,
inkley, C., Brooks, S.,
, Haghighi, P.,
aaric, P., Legaspi, R.,
lan, S.D., McCloskey, J.C.,
nas, P.J., Touchman, J.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          men,C.M., Schuler,G.D.,
nefer,C.F., Bhat,N.K.,
  Wang,J., Hsieh,F.,
pin,G.M., Hong,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  გ
Q
                                                                                                                                                                 model.
ouse."
                          1DA-5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tz,J., Myers,R.M.,
mailus,D.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jm (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dentia;
                                                                                                                                                                                                                                                                                                                                                                                      mRNA gi: 23956207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Intramural
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ., Wiggins, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (2002)
                                                                                                                                                                                            Infiltrating
```

```
ORIGIN
            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 59.3
Best Local Similarity 77.3
Matches 2544; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sgo
                                                                                                               545
                                                                                                                                      483
                                                                                                                                                                  485
                                                                                                                                                                                         423
                                                                                                                                                                                                                   425
                                                                                                                                                                                                                                            363
                                                                                                                                                                                                                                                                       365
                                                                                                                                                                                                                                                                                                303
                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                         124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64
                                                                                                                                                                                                                                                                                                                                                                                                                                GCTTCTCTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACCTGTCCCGCAGACAACAG
                                                                          GGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAGGAACTGTTGAC
                                                                                                                             ATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCACTCT
                                                                                                                                                                 CAGTGGCAATCCCCTAGCCGCGCGCTATGTCAAACCCCACACTCATTGATCTGCCCTCTCC
                                                                                                                                                                                                                    cTTGGAGCAGGACAGTGGCCTCTGGGATGGACGCAGATGTTCGTGGAGGCCCTAGAGCA
                                                                                                                                                                                                                                                                        GATTCTTAAAAAGATCAACACCTGTGGTAACACCAGCGCGGCAGAACTGCTGAGCAC
                                                                                                                                                                                                                                                                                   TTCTGCAGAGGACAGCTTCAGGAATCTCATCTTATTCTTCAGGCCCAGGCTGAAAATGTA
                                                                                                                                                                                                                                                                                                                                                                                             TTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATGTA
                                  TTCCTCTGAGACTGCCCATGACGAGTGTCTCCACTTGCTGACCCTCCTCCAGCCCACTTT
                                                                                                                                                                                AACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCTCTCCC
                                                                                                                                                                                                                                   CTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product = "Ifihl protein"
/product = "Ifihl protein"
/protein id="AAH80200.1"
/db xref="Gi:51329784"
/db xref="Gi:51329784"
/db xref="Gi:51329784"
/db xref="Gi:51329784"
/db xref="MGI:1918836"
/translation="MSIVCSAEDSFRULILFFRPLKMYIQVEPVLDHLIFLSAETKE
/ILKKINTCGNTSAAELLLSTLEQGGWPLGWTQMFVEALEHSGNPLAARYVKPTLIDL
PSPSSETAHDECLHLLTLLQPTLVDKLLINDVLDTCFEKGLLTVUEDRURISAAGNSGN
ESGVRELLRRIVQKENWFSTFLDVLRQTGNDALFQELTGGGCPEDNTESDTSLAEGSV
SCFDESLGHNSNMGRDSGTMGSDSDESVIQTKRVSPEPELQLRPYQMEVAQPALDGKN
IIICLPTGSGKTRVAVYITKDHLDKKKQASESGKVIVLVNKVMLAEQLFRKEFNPYLK
KWYRIIGLSGDTQLKISFPEVVKSYDVIISTAQILENSLLNLESGDDGVQLSDFSLI
IIDECHHTNKEAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPQILGLTASPGVQAAKK
QSEAEKHILNICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLE
IMASIOTYCQKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEALQIN
DTIRMIDAYSHLETFYTDEKEKKFAVLNDSDESDDEASSCNDQLKGDVKKSLKLDETD
EFLMNLFFDNKKMLKKLAENPKYENEKLIKLRNTILEQFTRSEESSRGIIFTKTRQST
YALSQWIMENAKFAEVGVKAHHLIGAGHSSEVKPMTQTEQKEVISKFRTGEINLLIAT
TVAEEGLDIKECNIVIRYGLVTNEIAMVQARGRARADESTYVLVTSSGSGVTEREIVN
DFREKMMYKAINRVQNMKPEEYAHKILELQVQSILEKKMKVKRSIAKQYNDNPSLITL
LCKNCSMLVCSGENIHVIEKMHVNMTPEFKGLYIVRENKALQKKFADYQTNGEIICK
CGQAWGTMMVHKGLDLPCLKIRNFVVNFKNNSPKKQYKKWVELPIRFPDLDYSEYCLY
SDED"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /db_xref="MGI:1918836"
231: .3161
/gene="Ifih1"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                59.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 1995.4;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3635;
             GGTGTAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                   544
                                                                                                                                                                                            482
                                                                                                                                                                                                                     484
                                                                                                                                                                                                                                                422
                                                                                                                                                                                                                                                                         424
                                                                                                                                                                                                                                                                                                 362
                                                                                                                                                                                                                                                                                                                          364
                                                                                                                                                                                                                                                                                                                                                    302
                                                                                                                                                                                                                                                                                                                                                                               304
                                                                                                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                  244
                                    662
                                                             664
                                                                                      602
                                                                                                                604
                                                                                                                                        542
             724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                           Ş
                                                                         8
8
                                                                                                                   밁
                                                                                                                                              Ş
                                                                                                                                                                              В
                                                                                                                                                                                                δ
                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                 뮹
                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                           유
                                                                                                                                                                                                                                                                                                                                                                                                                                         日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                밁
                                                                                                                                                                                                                                                           1440
                                                                                                                                                                                1418
                                                                                                                                                                                                          1500
                                                                                                                                                                                                                                  1358
                                                                                                                                                                                                                                                                                        1298
                                                                                                                                                                                                                                                                                                              1380
                                                                                                                                                                                                                                                                                                                                          1238
                                                                                                                                                                                                                                                                                                                                                                                           1178
                                                                                                                                                                                                                                                                                                                                                                                                                      1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1140
                                                                                                                             1478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1023
                                                                                                                                                       1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 663
                                                                                                                                                                                                                                                                                                                                        GTATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCA1
                                                                                                                                                                                                                                                                                                                                                                                                                                              GGATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTV
                                                                                                                            CAAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACT
                                                                                                                                                                                                                                                                                                                                                                                           CACCATGGGAAGTGATTCAGATGAA---GAGAATGTGGCAGCAAGAGCATCCCCGGAGCC 1079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAAAG 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGAGCTGCTGAGAAGGATTGTGCAGAAGGAAAACTGGTTTTCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTGCA:
                                                                                                                                                                                              ATGTCATCACACCAACAAGAAGCAGTGTATAATAACATCATGAGG(
                                                                                                                                                                                                                                  GGAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĊÁĊĊĀTĠĠĠĀĀĠŦĠĀŦŦĊĀĠĀŦĠĀĀĀGŦĠŦĊĀŦCCĀĠĀĊĀĀĀĀĀGĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGTCAGCTGCTTCGATGAAAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCGCCAAACTGGAAATGATGCACTATTCCAAGAACTAACAGGTGGAGGCTGCCCAGAAGA 844
CCTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTT
                                                                                      ACTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCAA
                                                                                                                                                                                 GTGCCATCACACCAACAAGGAGGCAGTCTATAACAACATCATGAGA
                                       --CACAGAATCAGACACA
 GCCATTGCAGATGC 1799
                                                                                                  GCCAAAGCTGAAGA 1679
                                                                                                                                                                                                 CATTATTTGATGCA 1559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTATCCCCCGAGCC 997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SAGAATAACTCATC 902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACAGTGAAAGAGAA 1657
                                                                             TĊTGÀGĠĊŤĠÀÀAÀ 1597
                                                                                                                                                                                   CGATATTTGAAGCA
                                                                                                                                                                                                                                                                                                                                           TTTCCÁGAAGTTGT 1297
                                                                                                                                                                                                                                                                                                                                                                                              TATTTGAAGAAATG 1237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTAGATGGGAAGAA 1057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAAGAGCAACTTCT 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGGATGTTCT
                                                                                                                                                 CCCTTCCTCAGAT 1619
                                                                                                                                                                                                                                                                                                      CCCTCTTAAACTT 1439
                                                                                                                                                                                                                                                                                                                                                         TTTCCAGAAGTTGT 1379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATAGTTCTTGTCAA 1259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGAAGGGAAGAA 1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAGGGATTCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTACATCACCAA 1117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCAGTGATTCAGG 1022
                                                   CTGTTAAAGAAAA 1739
                                                                                                                                                                                                                                     TTATCATTGATGA 1417
                                                                                                                                                                                                                                                       ATTATCATTGATGA 1499
                                                                                                                                                                                                                                                                                         CCCTCTTAAATCT 1357
                                                                                                                                                                                                                                                                                                                                                                                                              TTTTGAAGAAATG 1319
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCGTTCTTGTCAA 1177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTTGGCAGAAGG 877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTTTGGCAGAAGG 962
                                                                                                                                CCTGCCGCAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTACATTGCCAA 1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---- 847
                                                                                                                                                                                  1477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           784
                                                                                                                                1537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    847
```

Вþ 5

Ş

밁

멍 \$ 밁 á В Ś 밁 5 멍 Ş 밁 S

САСТААТААС 2879 	2820 GAAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCATCACTAATAAC
TAATGGAAAA 2819 TCCTGGAAAA 2734	2760 GAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAA
TTCAAAATAT 2759 TTCAAAACAT 2674	2700 GACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAAATAT
TCGAACATGA 2699 CCGAACGGGA 2614	2640 AGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGA
GTCGAGCCAG 2639 GTCGAGCCAG 2554	2580 TATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAG
GTAACATTGT 2579	2520 TCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGT
;GAAAAATCAA 2519 	2460 ACCCATGACACAGAATGAACAAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAAATCAA
\GTGAGTTCAA 2459 GTGAAGTCAA 2374	2400 TGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAA
ATGAAAAATT 2399 ATGCAAAGTT 2314	2340 TACAAAAACACGACAGAGGTGCATATGCGCTTTTCCCAGTGGATTACTGAAAATGAAAAATT
GAATAATCTT 2339 GAATTATTTT 2254	2280 AAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAAATCTT
TGACCAAATT 2279	2220 TAAAATGTTGAAAAGGCTGGCTGAAAACCCAGAATATGAAAATGAAAAGCTGACCAAATT
TTGAAAACAA 2219 TTGATAACAA 2134	2160 GAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAAACAA
ATGATTTAAA 2159 GCGATGTAAA 2074	2100 TAGTGATGAGGGTGGTGATGATGAGTATTGTGATGGTGATGA
TAGAAGATGA 2099	2040 TCATCTTGAAACTTTCTATAATGAAGAAAAGATAAGAAGTTTGCAGTCATAGAAGATGA
ATGCGTATAC 2039 ATGCATATAG 1957	1980 GAGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATAC
1979 	1920 AATGGAAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTT
	1860 TTGTCAAATGAGTCCAAATGTCAGATTTTTGGAACTCAACCCTATGAACAATGGGCCATTCA
ATTCAAACTTA 1859 ATTCAGACTTA 1777	1800 AACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTA
 NTTGCTGATGA 1717	

음 성

유 성

ф

8

 ф

8 8

Ş

음 경 ф

ई

유 왕

Ф

á

망

ठ

망

8

ş

8

Ş

9

১ ৪ ১

Дb	Ş	뮹	Ş	망	8	망	Ş	뮹	ð	DЬ	ş	DЬ	Ş	DЬ	ş	g D
3215 7	3300 %	3155 /	3240 (3095 (3180 1	3035 /	3120 1	2975 1	3060 1	. 2915	3000 (2855	2940 (2795 <i>I</i>	2880 7	2735 (
TTAATTGTTGTTTTCGCTACACTACTGAGCTAACTCTAGAATATGTAGA	ATGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAA 3348	AGATTAGCACTTGATTCATGATTATTTTAAAAATATTGCCAACTCAACATTGAATATGATT	GGATTÄGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATT	GGAATTGCCTATCAGATTTCCTGATCTTGACTACTCAGAATACTGCTTGTATAGTGATGA	AGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTATTTA	AAGGAATTTTGTAGTCAATTTCAAAAATAACTCACCGAAGAAACAGTACAAGAAGTGGGT	AGGAATTTTG'	GGCCAGGCTT	TGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAAT	CAAAGCACTGCAAAAGAAATTTGCTGATTATCAGACCAATGGAGAGATTATCTGCAAGTG	CAAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAAT	GAAGATGCATCATGTCAATATGACACCAGAATTCAAGGGACTCTACATTGTAAGAGAAAA	AAAATGCATC	CTTCTCTGCA	TTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTCTGGGGAAGATATCCATGTAATTGA	GAAAATGAAAGTCAAAAGAAGCATTGCAAAGCAATACAACGACAATCCATCGTTAATAAC 2794
TTCGCTACA	ATTCATTATGO	FGATTCATGA:	rgattgaaga:	CAGATTTCC:	CACATTTCC	FAGTCAATTT	ragtggtttt	GGGAACAAT	GGGAACAAT	AAAGAAATT	AAAGAAGTG:	ATGTCAATAT	ACGTCAATATO	AAATTGTAG	AAAACTGCAG	TCAAAAGAAG
CTACTGAGCT	TACAGAACTO	TATTTTAAA	TCTTTTAAA	GATCTTGACT	CAATCTTGACT	CAAAAATAACT	CAAAAATAATT	ATGGTGCAC	3ATGGTGCAC	GCTGATTATO	TGCCGACTATO	JACACCAGAAT	BACCCCAGAA	CATGCTGGTCT	TGTGCTAGCCT	CATTGCAAAG
AACTCTAGAA	GACATAAGAA	ATATTGCCAA	ATACTATCAG	FACTCAGAAT.	TATTCAGAAT	TCACCGAAGA	TCAACAAAGA	AAAGGTTTAG	AAAGGCTTAG	CAGACCAATG	CAAATAAATG	TTCAAGGGAC	TCAAGGAAC	recreegae	IGTTCTGGGG	CAATACAACG
TATGTAGA 3	TCAATAAA 3	CTCAACATTG	TTAAACATTT	ACTGCTTGTA	GCTGTTTATT	AACAGTACAA	AACAATACAA	ATTIGCCTIC	ATTTGCCTTG	GAGAGATTAT	GTGAAATCAT	TCTACATTGT	TTACATTGT	AAAACATCCA	AAGATATCCA	ACAATCCATC
3263	348		AATATGATT	TAGTGATGA	TAGTGATGA	GAAGTGGGT	AAAGTGGGT	TCTTAAAAT	TCTCAAAAT	CTGCAAGTG	CTGCAAATG	'AAGAGAAAA	'AAGAGAAAA	TGTCATTGA	TGTAATTGA	GTTAATAAC
		3214	3299	3154	3239	3094	3179	3034	3119	2974	3059	2914	2999	2854	2939	2794

Search completed: March 13, 2006, 23:18:31 Job time: 16328 secs

This Page Blank (Uspin)

1.

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               옻
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-process
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring tabl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        00 00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ī
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-515-363C-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2006, 17:31:31 ; Search time 1894 Seconds (without alignments)
11840.914 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version
(c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.1.7
Biocceleration
od of the control of
```

re:	3365 1 gcgcgccggcctgagagcccaaaatgattgttttactctg 3365
le:	IDENTITY_NUC Gapop 10.0 , Gapext 1.0
	4996997 seqs, 3332346308 residues
r of	hits satisfying chosen parameters: 9993994
seq	seq length: 0 seq length: 2000000000
sing	sing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries
	N_Geneseq_21:* 1: geneseqn1980s:*
	2: geneseqn1990s:* 3: geneseqn2000s:* 4: qeneseqn2001as:*
	5: geneseqn2001bs:* 6: geneseqn2002as:*
	7: geneseqn2002bs:* 8: geneseqn2003as:*
	9: geneseqn2003bs:*
	13: geneseqn2004bs:* 14: geneseqn2005s:*
No.	is the number of results predicted by chance to have a

Score	Query Match	Length	DB	ID	Description
3365	100.0	3365	44	AAD17203	Aad17203 Human mel
3365	100.0	.3380	12	ADJ74904	Adj74904 Marker g
3365	100.0	3380	13	ADR14404	Adr14404 Human NF
3365	100.0	3380	14	AEA23691	Aea23691 Human PR
3365	100.0	3380	14	AEA36113	Aea36113 Human nu
3361.8	99.9	3434	14	ADY17563	Ady17563 DNA enco
$\mathbf{\mu}$	99.9	3434	14	ADY20376	Ady20376 DNA enco
3360.2	99.9	3928	11	ACN91892	Acn91892 Breast c
3353	99.6	3379	12	ADN04879	Adn04879 Antipsor
3339.2	99.2	3668	12	ADQ22237	Adq22237 Human so
3338.8	99.2	3372	σ	ABA04908	Aba04908 Human RNA
3316.2	98.5	3446	10	ADC30823	Adc30823 Human no
3104	92.2	3131	4	AAD11170	Aadll170 Human mel
2202.4	65.5	3771	12	ADJ75813	Adj75813 Marker g
1878	55.8	1967	4	AAS40960	Aas40960 cDNA enco
1766	52.5	1776	10	ADA53260	Ada53260 Human co
1460.2	43.4	1557	4.	AAI59285	Aai59285 Human pol
1435.6	42.7	1443	თ	ABA04916	Aba04916 Human RNA
1316.6	39.1	1382	4	AAI61071	Aai61071 Human pol

			a	ი	ი	O,	ი	ი	ი	Ω	ი														
45	44	43	42	41	40	39	38	37	36	35	34	ω ω	32	31	30	29	28	27	26	25	24	23	22	21	20
371.2	376.4	419.4	453	455.2	455.2	455.2	455.2	507.2	507.2	507.2	507.2	554	556	577.2	577.2	663	663	738.8	803	803	1130.8	1254.6	1278.8	1278.8	1316.6
11.0	11.2					13.5	13.5	15.1	15.1	15.1	15.1	16.5	16.5	17.2	17.2	19.7	19.7	22.0	23.9		33.6	37.3		38.0	39.1
392	458	457	453	499	499	499	499	595	595	595	595	1036	6406	609	609	3704	3692	956	1270	1258 ·	1319	1284	1392	1392	1382
ຫ	w	Q	12	4	4	4	4	4	4.	4	4	4	4	თ	4.	4	4.	ഗ	4	4	4	თ	13	11	10
AAF66485	AAA64601	ACH25741	ACH90906	AAK22046	AAK48209	AAI54039	ABA73600	AAK09292	AAK35181	AAI40897	ABA61000	AAD17204	AAD17207	ABQ54189	AAH33745	AAS01152	AAS01150	AAS91688	AAS01151	AAS01149	AAS41517	ABA04913	ADS82789	ADI30722	ADC32572
Aaf66485 Novel hum	Aaa64601 Nucleotid	Ach25741 Human adu	Ach90906 Human gen	Aak22046 Human bra	Aak48209 Human bon	Aai54039 Probe #22	Aba73600 Human foe	Human	Aak35181 Human bon	Aai40897 Probe #95	Aba61000 Human foe	Aad17204 Human mel	Human	Abq54189 Human ova	Aah33745 Human col	Aas01152 Interfero	Aas01150 Interfero	Aas91688 DNA encod	Aas01151 Interfero	Aas01149 Interfero	Aas41517 cDNA enco	Aba04913 Human RNA	Ads82789 Human lym	Adi30722 Human cDN	Adc32572 Human nov

ALIGNMENTS

AAD17203 standard; cDNA; 3365

BP.

AAD17203;

```
RESULT 1
AAD17203
ID AAD1
XX
AC AAD1
XX
DT 29-N
XX
DE Huma
XX
Huma
XX
Huma
XX
Huma
XX
FT CDS.
FT misc
FT misc
FT misc
FT misc
FT poly
FT POly
XX
XX
FT POly
XX
XX
FT POly
XX
XX
Y
PY
ET 28-I
XX
PA (UY(
                                                                                                                                                                                                                                                                                                                                               Human; melanoma differentiation associated gene; Mda-5; interferon; IFN; RNA helicase motif; caspase recruitment domain; CARD; therapy; melanoma; neuroblastoma; astrocytoma; glioblastoma; multiforme; cancer; cervical; breast; colon; prostate; osteosarcoma; chrondosarcoma; systemic toxicity; central nervous system; cytostatic; apoptosis; ss.
                                                                                                                                                 polyA_signal
                                                                                                                                                                                        misc_feature
                                    29-FEB-2000; 2000US-00515363.
                                                             28-FEB-2001;
                                                                                      07-SEP-2001.
                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                              Human melanoma differentiation associated (Mda)-5 cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      29-NOV-2001
             (UYCO ) UNIV COLUMBIA NEW YORK.
                                                                                                                WO200164707-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                             2001WO-US006960.
                                                                                                                                   /*tag= c
/note= "ATTTA motif"
3343. .3348
/*tag= d
                                                                                                                                                                               /*tag= L
/note= "ATTTA r
/note= "ATTTA r
3284. .3287
                                                                                                                                                                                                                                                                                Location/Qualifiers 169. .3246
                                                                                                                                                                                                                              /product= "Human melanoma differentiation associated (Mda)-5 protein" 3225. .3228
                                                                                                                                                                                                         motif"
```

```
The present invention relates to an isolated nucleic acid encoding a contains a caspase recruitment domain (CARD) and a RNA helicase motif. CC Mda-5 is a novel interferon (IFN) inducible gene with structural CC similarities to RNA helicases and CARD motif containing proteins. Mda-5 is induced during terminal differentiation in human melanoma cells treated with the combination of recombinant fibroblast IFN and the cancer e.g., melanoma, neuroblastoma, Mda-5 is useful for identifying cancer e.g., melanoma, neuroblastoma, astrocytoma, glioblastoma CC cancer, osteosarcoma, chrondosarcoma and especially where the cancer is a cancer of the central nervous system and apoptosis. The Mda-5 promoter CC exhibits melanocyte tissue specificity and minimises systemic toxicity.

The present sequence is human Mda-5 cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 3365; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gene useful for cancer activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fisher
                                                                                                                                                     361
                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2001-565494
)B; AAE10155
                                541
                                                       481
                                                                               481
                                                                                                      421
                                                                                                                             421
                                                                                                                                                                          361
                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вã
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCGCGCCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCCGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page
                                                                                                                                                                                                                                                              3365 BP; 1138 A;
                                                                     CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCACT
                                                                                                                                                                                                                                                                                                          TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATG
                                                                                                                                                                                                                                                                                                                                              GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC
         CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAACTGTTG
                      CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAGGAACTGTTG
                                                                                                       AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCTCT
                                                                                                                      AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCTCT
                                                                                                                                                                     ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGG
                                                                                                                                                                                                   CAGATT
                                                                                                                                                                                                                         TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; llarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-18;
                                                                                                                                                                                                  'n
                                                                                                                                                     GGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         152pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gopalkrishnan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           encoding a Melanoma Differentiation Associated cell growth suppression, apoptosis and anti-viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         644 C; 753 G; 830 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 3365;
Pred. No. 0;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RV;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ς;
                                                                                                                                                                                                                                                   GCCTGCAGAGGTGAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0 Other;
                                                       CCTTCAGCCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                              480
                                                                                                                                                                            420
                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                       180
         600
                                 600
                                                       540
                                                                                540
                                                                                                        480
                                                                                                                                                     420
                                                                                                                                                                                                   360
                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ø
                   밁
                                         ঠ
                                                                 밁
                                                                                          á
                                                                                                                   g
                                                                                                                                    Ş
                                                                                                                                                               맑
                                                                                                                                                                                    Ş
                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                            1561
                                                                                                                                          1501
                                                                                                                                                                  1441
                                                                                                                                                                                                                                      1381
                                                                                                                                                                                                                                                                                                            1261
                                                                                                                                                                                                                                                                                                                                                            1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1021
                                             1621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                     AAGTTGAAAAACAATAGACTCAAGAAAGAAAACAAACCAGTGATTCC
                                                                                                                                                                  GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCAT
                                                                                                                                                                                                               AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTV
                                                                                                                                                                                                                                                             TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCAT1
                                                                                                                                                                                                                                                                                                                                                          GATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAAATGGAGAAGATGCT
                                                                                                                                                                                                                                                                                                                          AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATT
                                                                                                                                                                                                                                                                                                                                                                                                                     ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCAGAATCATCTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACAC
CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAA
                                                                                                                                TGTCATCACACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTC
                                    ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCT
CTGTTAAAGAAAAC 1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NTGAATCAGGTGTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAGTTTGGCAGAA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAGAATAACTCA 900
                        CAAAGCTGAAGAA 1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGAATCAGGTGTA
                                   CAAAGCTGAAGAA 1680
                                                                       CCTTCCTCAGATA 1620
                                                                                                                      TTATTTGATGCAG 1560
                                                                                                                                  TTATTTGATGCAG 1560
                                                                                                                                                                               TATCATTGATGAA 1500
                                                                                                                                                                                                                CCTCTTAAACTTG 1440
                                                                                                                                                                                                                                    CCTCTTAAACTTG 1440
                                                                                                                                                                                                                                                                           TCCAGAAGTTGTC 1380
                                                                                                                                                                                                                                                                                                                                                                                                            TTACATTGCCAAG 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCCCCGGAGCCA 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCCCCGGAGCCA 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGCAGTGATTCA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAGAATAACTCA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAAGAGCAACTT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAAGAGCAACTT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGATTGCTCAGAA 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTCTGAATGTT 720
                                                                                   CCTTCCTCAGATA 1620
                                                                                                                                                                   TATCATTGATGAA 1500
                                                                                                                                                                                                                                                                TCCAGAAGTTGTC
                                                                                                                                                                                                                                                                                                                                                            AGTTCTTGTCAAT 1260
                                                                                                                                                                                                                                                                                                                                                                          AGTTCTTGTCAAT 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGCAGTGATTCA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                       TTACATTGCCAAG 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGATTGCTCAGAA 780
                                                                                                                                                                                                                                                                                                                          TTGAAGAAATGG 1320
                                                                                                                                                                                                                                                                                                             ITGAAGAAATGG
                                                                                                                                                                                                                                                                                                              1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                               1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
```

9 S

5

g S g δ 멍 र् Ş

밁

밁 Ş В Ş Ş

```
2101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1981
                                                                                                                                         2641
                                                                                                                                                                                                                                                                                              2461
                                                                                                                                                                                                                                                                                                                         2461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1861
                                                                                                                                                                                                                                                                                           CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAATGTTGAAAAGGCTGGCTGAAAAACCCAGAATATGAAAATGAAAAAGCTGACCAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAAGAAAAC
                                                                                                        GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA
AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG
                                              ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG
                                                                                                                                                                     ATCCGTTATGGTCTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1920
                                                                                                                                                                                                                                                                                                                                                                                     2460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1740
                                                                                                                                         2700
                                                                                                                                                                       2640
                                                                                                                                                                                                    2640
                                                                                                                                                                                                                                                                                                                          2520
                                                                                                                                                                                                                                                                                                                                                                                                                     2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                   2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2100
                                                2760
                                                                             2760
                                                                                                           2700
                                                                                                                                                                                                                                                                2580
                                                                                                                                                                                                                                                                                              2520
                                                                                                                                                                                                                                                                                                                                                         2460
   RESULT 2
ADJ74904
ID ADJ7
XX ADJ7
AC ADJ7
XX ADJ7
AC A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       & 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    문
                                                                                                                                                                                                                                                            bronchial asthma; chronic obstructive pulmonary disease respiratory epithelial cell; interleukin-13; respirator gene therapy; marker gene; gene; ds.
                                                                                                                                                                                                                                   Homo
                                                                                             06-AUG-2002;
20-MAR-2003;
                                                                                                                                                                                                                                                                                                                            Marker
                                                                                                                                                                                                                                                                                                                                                                                                                     ADJ74904
                                                                                                                                          04-AUG-2003;
                                                                                                                                                                        03-MAR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3061
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2761
     2004-193155/19
                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                         gene
                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 crcic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CICIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATA!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACA1
                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAACCAGAGGAGTATGCTCATAAGATTTTGGÄATTACAGATGCAAA
                                  Sugita
                                                                                                                                                                                                                                                                                                                          SEQ
                                                                                             2002JP-00229312
2003JP-00077212
                                                                                                                                         2003EP-00254857.
                                                                                                                                                                                                                                                                                                                                                           (first
                                                                 RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3365
                                                                                                                                                                                                                                                                                                                            ß
                                  Ķ
                                                                                                                                                                                                                                                                                                                             NO:156
                                                                                                                                                                                                                                                                                                                                                                                                                      DNA;
                                                                                                                                                                                                                                                                                                                                                        entry)
                                   Yamaya
                                                                                                                                                                                                                                                                                                                                                                                                                     3380
                                   Z,
                                    Kubo
                                   Ή
                                   Nagai
                                    Ħ,
                                                                                                                                                                                                                                                                                  y; antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATAATGGAAAAG 2820
                                    nara K;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATCACTAATAACT 2880
||||||||||||||
|CATCACTAATAACT 2880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGATTGTTTTA 3360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTAATATGATTA 3300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAAAAAGTGGGTA 3180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGATTGTTTTA 3360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTAATATGATTA 3300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTTAGTGATGAG 3240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAAAAGTGGGTA 3180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATCTGCAAATGT 3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCTGCAAATGT 3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGTCTCAAAATA 3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IGTAAGAGAAAAC 3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATGTAATTGAG 2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTAGTGATGAG 3240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTAAGAGAAAAC 3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGTCTCAAAATA 3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATGTAATTGAG 2940
```

ঠ

음 성

음 성

음 성 음 성

8 8 8 8 8 8 8 8

8

g

S

5 8 5

음 중

유장

음 성

유

```
CY
The present invention describes a method of testing for bronchial asthma
CC or chronic obstructive pulmonary disease. The method comprises
CC determining the expression level of a marker gene in a biological sample
CC from a subject, comparing the expression level determined with the
CC expression level of the marker gene in a biological sample from a healthy
CC subject, and judging whether the subject has bronchial asthma or chronic
CC obstructive pulmonary disease. The marker gene comprises: (a) a group of
CC genes (S1) whose expression levels increase when respiratory epithelial
CC cells are stimulated with interleukin-13; or (b) a group of genes (S2)
CC whose expression levels decrease when respiratory epithelial
CC testing for bronchial asthma or chronic obstructive pulmonary disease;
CC (2) a kit for screening for a candidate compound for a therapeutic agent
CC to treat bronchial asthma or chronic obstructive pulmonary disease;
CC (2) a kit for screening for a candidate compound for a therapeutic agent
CC constructive pulmonary disease;
CC disease;
CC disease;
(4) an inducer that induces bronchial asthma in a mouse;
CC disease;
CC obstructive pulmonary disease;
CC a marker gene or an antisense nucleic acid corresponding to a portion of
CC the marker gene, a ribozyme, a polymucleotide that suppresses the
CC expression of the gene through an RNA effect or an antibody recognising
CC a protein encoded by a marker gene; and (7) a DNA chip for testing for
CC pronchial asthma or a chronic obstructive pulmonary disease, on which a
CC and antiasthmatic activities, and can be used in gene therapy. The method
CC is useful for testing for or screening for a therapeutic agent for
CC bronchial asthma or chronic obstructive pulmonary disease. The present
CC bronchial asthma or chronic obstructive pulmonary disease. The present
CC bronchial asthma or chronic obstructive pulmonary disease. The present
CC bronchial asthma or chronic obstructive pulmonary disease. The present
CC bronchial asthma or chronic obstructive pu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local S
Matches 3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Testing fo comparing from a sub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         healthy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3365;
                                    361
                                                                                                       301
                                                                                                                                                                           241
                                                                      361
                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g for bronchial asthma or chronic obstructive pulmonary disease ling the expression level of a marker gene in a biological sample subject with the expression level of the gene in a sample from a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        subject.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                               CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACCTGTCCCGCAGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC
                                                                                                                           AGAACCGGCAGCCCTCTGGCCGCCCCCCTACATGAACCCTGAGCTCACGGACTTGCCCTCT
                                                        ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGG
                                                                                                                                                                                                                                                                   TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                               CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACACTTTCACCTGTCCCGCAGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3380 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
llarity 100.0%;
Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NO 156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1153 A; 644 C; 753 G; 830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 3365;
Pred. No. 0;
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             þ
                                                                      420
                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           λĢ
                                     420
                                                                                                         360
                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                S
                                                                                                                        멂
                                                                                                                                                           S
                                                                                                                                                                                               밁
                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
TGTCATCACCACCAACAAGAAGCAGTGTATAATAACATCATGAGGC
                                                                                                                                                                                                                                                                                         AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATT
                                                                                                                                                                                                                                                                                                                                                              GATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTC
                                                                                                                                           AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTC
                                                                                                                                                                                                                   TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATT
                                                                                                                                                                                                                                                                                                                                            GATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTAI
                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCCAGCCCAGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTTCAGAATCAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGA
                                                       GAAAATGGAGAAGATGCT
                                                                                GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                 ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTG0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGAGAGCTACTAAAAAGGATTGTGCAGAAAAGAAAACTGGTTCTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CIGGIGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .TCTGGAGAAGGAGGTCTGGGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCCCCGGAGCCA 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAATCAGGTGTA
                                                                                                                            CCTCTTAMACTTG 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTTCTGAATGTT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAATCAGGTGTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGCAGTGATTCA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAAGAGCAACTT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTTCTGAATGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGGAACTGTTG
  TTATTTGATGCAG
                                                           TATCATTGATGAA
                                                                                                                                                                                                                                                                                                                                                                 AGTTCTTGTCAAT 1260
                                                                                                                                                                                                                                                                                                                                                                                                                TTACATTGCCAAG 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGCAGTGATTCA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGTTTGGCAGAA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAATAACTCA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGAATAACTCA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGGAACTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTTCAGCCCACT 540
                                                                                                                                                                                                                                                                                                                                             AGTTCTTGTCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGTTTGGCAGAA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IGATTGCTCAGAA 780
                                                                                                                                                                                                   CCAGAAGTTGTC
                                                                              PATCATTGATGAA 1500
                                                                                                                                                                                                                                                                        TTGAAGAAATGG
                                                                                                                                                                                                                            CCAGAAGTTGTC 1380
                                                                                                                                                                                                                                                                                      TTGAAGAAATGG 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTCAGCCCACT
                                                           1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                        1560
                                                                                                                                                                                                   1380
                                                                                                                                                                                                                                                                                                                                            1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                        1320
```

S

밁 Ş B

Ş

Ş

8 S В S 문 Ś 밁

Ş

밁

S 멂

밁

5

```
2461
     2581
                                                             2461
                                                                            2401
                                                                                                                                                                2221
                                                                                                                                                                                                                                        2101
                                                                                                                                                                                                                                                                                                                1921
                                                                                                                                                                                                                                                                                                                             1921
                                                                                                                                                                                                                                                                                                                                                          1861
                                                                                                                                                                                                                                                                                                                                                                         1801
                                                                                                                                                                                                                                                                                                                                                                                                                                 1681
                                                                                                                                                               AAAATGTTGAAAAGGCTGGCTGAAAACCCAGAATATGAAAATGAAAAGCTGACCAAATTA
                                                                                                                                                                                                                                                      CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATCAAT
                                                                                                                                             AGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTT
                                                                                                                                                                                                                          AGTGATGAGGTGATGATGAGTATTGTGATGGTGATGAAGA
                                                                                                                                                                                                                                  ATGGAAAAAAAAAGCTGCAAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGTTGAAAAACAATAGACTCAAGAAAGAAAACAAACCAGTGATTCCCCCTTCCTCAGATA
                                                                                                                                     AGAAATACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTTGAAAAACAATAGACTCAAGAAAGAAAACAAACCAGTGATTCCCCCTTCCTCAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTCATCACACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAG
                  CTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA
                  TGAGGATGATTTAAAG
                                                                                                                                                                                                                                                                                                                                            1920
                                                                                                                                                                                                                                                                                                                                                                                                                                             1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1680
                                                                                                                                                                                                                                                                                                                1980
                                                                                                                                                                                                                                                                                                                             1980
                                                                                                                                                                                                                                                                                                                                                          1920
                                                                                                                                                                                                                                                                                                                                                                         1860
                                                                                                                                                                                                                                                                                                                                                                                     1860
                                                                                                                                                                                                                                                                                                                                                                                                     1800
                                                                                                                                                                                                                                                                                                                                                                                                                   1800
                                                                                                                                                                                                                                                                                                                                                                                                                                1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1620
                                                2520
                                                                            2460
                                                                                          2460
                                                                                                         2400
                                                                                                                     2400
                                                                                                                                    2340
                                                                                                                                                  2340
                                                                                                                                                                2280
                                                                                                                                                                                             2220
                                                                                                                                                                                                            2220
                                                                                                                                                                                                                         2160
                                                                                                                                                                                                                                        2160
                                                                                                                                                                                                                                                       2100
                                                                                                                                                                                                                                                                    2100
                                                                                                                                                                                                                                                                                   2040
                                                                                                                                                                                                                                                                                                 2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1560
```

В δ В

ঠ

멍 ্হ 멍 Ş B ঠ 밁 δ В

```
음 성
                      밁
                                   S
                                              음 성
                                                                           밁
                                                                                         Ş
                                                                                                         밁
                                                                                                                 . ঠ
                                                                                                                                  음, 성
                                                                                                                                                             음 성
                                                                                                                                                                                        B
                                                                                                                                                                                                  र्
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                              ्र
                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                             g.
                                                                                                                                                                                                                                                                                                                                       S
                                                                                                         3121
            3361
                                                                 3241
                                                                                                                      3121
                                                                                                                                                              3001
                                                                                                                                                                                          2941
                                                                                                                                                                                                                    2881
        CICIG
                        TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAA
                                                  GATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACI
                                                                               GAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTT:
                                                                                                                                                              GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAG
CICIG
                                                                                                         AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATA
                                                                                                                                    GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCC
                                                                                                                                                                                                                                              AAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCO
                                                                                                                                                                                                                                                                        GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAG
           3365
                                                                                                                                                                                                                           IGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATAI
                                                                                                                                                                                                                                                                                                  GTGTTCAAAATATG :
                                                                                                                                                                                                                                                                                                                             TTATCGAACATGAG 2700
                          AAATGATTGTTTTA 3360
                                                                                                                                                              TCATCTGCAAATGT 3060
                                                                                                                                                                                                                                              CATCACTAATAACT 2880
                                                                                                                                                                                                                                                                        TATAATGGAAAAG
                                                                                                                                                                                                                                                                                STATAATGGAAAAG 2820
                                                   TTTAATATGATTA 3300
                                                                                                          CAAAAGTGGGTA 3180
                                                                                                                                                                                                                   CCATGTAATTGAG 2940
                                 AATGATTGTTTTA 3360
                                                                                      ATTTAGTGATGAG 3240
                                                                                                                     CAAAAAGTGGGTA 3180
                                                                                                                                   TTGTCTCAAAATA 3120
                                                                                                                                                                                         TGTAAGAGAAAAC 3000
                                                          TTTAATATGATTA 3300
                                                                                ATTTAGTGATGAG 3240
                                                                                                                                                                                                      TGTAAGAGAAAAC 3000
                                                                                                                                                                                                                                                                         2820
                                                                                                                                                                                                                                                                                                   2760
```

S

á

뭕

5

멍 S 멍 ઈ 뮍 B 8

멍 ঠ 뫄 5 g 5

standard; 3380

-2004 (first

NF-kappaB pathway-associated gene SeqID405

RESULT 3
ADR14404
ID ADR14404;
XX
AC ADR14404;
XX
DT 21-OCT-20
XX
DE Human NF-:
XX
KW NF-kappaB
KW antiarthr
KW antiarter
KW antiarter
KW immunosup;
KW inflammat
KW hepatic d
KW hyper-IgM
KW Y-linked
KW viral infi NF-kappaB pathway; antiinflammatory; cytostatic; hepatotropic; virucide; antiarthritic; antirheumatic; gastrointestinal-Gen; antiasthmatic; antiarteriosclerotic; immunomodulator; cerebroprotective; vasotropic; immunosuppressive; vulnerary; gene therapy; immune disorder; inflammatory disorder; NF-kappaB regulation; cancer; aberrant apoptosis; hepatic disorder; Hodgkin's lymphoma; haematopoietic tumour; hyper-IgM syndrome; hypohidrotic ectodermal dysplasia; X-linked anhidrotic ectodermal dysplasia; immunodeficiency; viral infection; HTLV-1; HTLV-1; hepatitis B; hepatitis C; EBV; influenza; C; EBV; influenza;

```
the genes which encode them) to the NF-kappaB pathway. The invention may CC be useful for the production of compounds with an antiinflammatory, cytostatic, hepatotropic, virucide, antiarthritic, antiinflammatory, CC quastrointestinal-Gen, antiasthmatic, antiarthritic, anticheumatic, CC immunomodulator, cerebroprotective, vasotropic, immunosuppressive or culnerary activity or for gene therapy. The proteins and nucleotides are useful for diagnosing, preventing, treating, or ameliorating conditions or diseases associated with the NF-kappaB pathway. The condition is an CC immune disorder, an inflammatory disorder, an inflammatory disorder, cerebreated to aberrant NF-kappaB regulation, cancer, aberrant apoptosis, the patitist of disorders, Hodgkin's lymphomas, haematopoietic tumours, hyper-IgM condermal dysplasia, immunodeficiency, viral infections, HIV-1, HTV-1, hepatitits B, hepatitis C, EBV, influenza, viral replication, host cell survival, evasion of immune responses, rheumatoid arthritis, inflammatory bwell disease, colitis, asthma, atherosclerosis, cachexia, euthyroid sick syndrome, stroke, EAE, autoimmune disorders, disorders related to hyper compenital conditions, bitth defects, necrotic lesions, wounds, cygan transplant rejection, conditions related to organ transplant conditions, bitth defects, necrotic lesions, wounds, cygan transplant rejection, conditions related to organ transplant conditions related to aberrant signal transduction, bott invention, hote: This sequence is that of a human gene which is subject to the novel association with the NF-kappaB pathway of the invention. Note: This sequence does not appear in the specification but the indexer from Genbank.
                                                                                                                                       밁
S
                                                   5
                                                                                 Query Match
Best Local S
Matches 3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           viral replication; host cell survival; evasion of immune response; rheumatoid arthritis; inflammatory bowel disease; colitis; asthma; atherosclerosis; cachexia; euthyroid sick syndrome; stroke; EAE; autoimmune disorder; hyper immune activity; aberrant acute phase response; hypercongenital condition; birth de necrotic lesion; wound; organ transplant rejection; aberrant signal transduction; proliferating disorder; cancer; HIV propagation; gene; ds; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New isolated polynucleotides and polypeptides associated with NF-kappaB pathway, useful for diagnosing, treating, or preventing disorders or diseases associated with NF-kappaB pathway.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2004-562168/54.
P-PSDB; ADR14405.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14-JAN-2003;
12-MAY-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo
                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nadler
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-AUG-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2004065577-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (BRIM ) BRISTOL-MYERS
                                                                                   Local Similarity
les 3365; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                                                                                        3380
                                                   GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC
CCTGCTTCTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACCTGTCCCGCAGACAA
                                                                                 100.0%;
larity 100.0%;
Conservative 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2003US-0440068P.
2003US-0469757P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ID NO 405; 237pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2004WO-US000798
                                                                                                                                        B₽;
                                                                                                                                        1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ر
م
م
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SQUIBB
                                                                                                                                        A
                                                                                                                                        644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Feder
                                                                                   <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                 Score 3365;
Pred. No. 0;
Mismatches
                                                                                                                                        ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ŋ,
                                                                                                                                        753
                                                                                                                                        <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Carman
                                                                                                                                        830
                                                                                                             DВ
                                                                                                                                        Ή,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ٦
;
                             CATTGTCAGGCACAGAGCGGTAGAC
                                                                                                            13;
                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      condition; birth defect;
                                                                                                                                         0
                                                                                                                                        Ų,
                                                                                                            Length
                                                                                                                                        0
                                                                                                              3380
                                                                                  0
                                                                                  Gaps
 120
                            60
                                                                                  0
                                                                S
                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
         S
                                                                                               멍
                                                                                                                        र्
                                                                                                                                                    문
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                           $
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                            901
                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAGC
                                                                                                                                                                      GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACAT
                                                                                                                                                                                                                          TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTTCAGAATCAGACAC
                                                                                                                                                                                                                                                                                                                                       AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                               CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGT
                                                                    GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACA:
                                                                                                                                                                                                                                                                   CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGGCATGGAGAATAACTCA
                                                                                                                                                                                                                                                                                  CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGGCATGGAGAATAACTCA 900
                                                                                                                                                                                                                                                                                                                         AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAACCGGCAGCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCCTGAGCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TACATCCAGGTGGAGCCTGTGCTGGACCTGACCTTTCTGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACCT
                                                                                                                                                                                                             TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGAGGAACTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGGACTTGCCCTCT
                                                                      GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCCCGCAGACAA
                                                                                                                                                                      GGGCAGTGATTCA 1020
                                                                                                                                                                                                                                                                                                                          GGAAGAGCAACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGTCGAATGGG 180
           TTACATTGCCAAG 1200
                                                                                                                                                                                                                                                                                                                                                                                                TGATTGCTCAGAA 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTTCTGAATGTT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGCTGCTGAGC
                                                                                                               ATCCCCGGAGCCA 1080
                                                                                                                                                       GGGCAGTGATTCA 1020
                                                                                                                                                                                                                            AAGTTTGGCAGAA 960
                                                                                                                                                                                                                                                                                                                                        GGAAGAGCAACTT 840
                                                                                                                                                                                                                                                                                                                                                                              TGATTGCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAATCAGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAATCAGGTGTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTTCAGCCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCCCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAGGCCCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGCTGCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGAGGTGAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGAGGTGAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGGGTGAAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGGTGAAAATG
                                                                                                  1080
                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                              780
                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
```

8	§
1 AMGETIACTICALGIACIAGA CIANALAGOA CITCOCCANGAGITICO CALCATTITUTICA CIANTO CONTROLO CONTROLO CITTOTO CALCATTITUTICA CIANTO CONTROLO CITTOTO CALCATTITUTICA CIANTO CITTOTO CIANTO CITTOTO CITTO	TCACTTAGACAAGAAAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAA
2	Ş
2231 ACADADACCIGACIGACITATIOCOGTITICCCAGGAATCAGAACTGAGAATCAGAACTGAGAATCATTT 234 2341 ACADADACACGAGAGATTACCATATICCAGTTGATTACCAGTGAATCAGAAATTT 240 2341 ACADADACACGACGAGATTACCATATICCAGTGATTACCACTGAGAATTCAAAATTT 240 2401 GCTGAAATCACACAAAAATCAACAAAAACAAACAATTTCACACACGAAAATCAAATTTACTTT 250 2401 GCTGAAATCACACAAAATCAACAAAAAACAAAAACAAAACAATTTCACACACAAAATCAATTACAAATCAATTTCACACACAAAAATCAAATCAATTACAAATCAATTTCACACACAAAAACAAAAACAAAAAA	2281 AGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTT 2340

```
RESULT 4
AEA23691
ID AEA2
XX AEA2
XX AEA2
XX AEA2
XX AEA2
XX AEA2
XX Imm
XX AEA2
XX 
                                                                                                           Ś
                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                              밁
                                            S
                                                                                                                                                                      ঠ
                                                                                                                                                                                                        Query Match
Best Local Similarity 100.0%;
Matches 3365; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New nucleic treating an rheumatoid a
                                                                                                                                                                                                                                                                                                    The invention relates to an isolated nucleic acid. The polypeptide, compound or composition, and methods are useful for diagnosing and treating an immune related disorder, e.g. systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, spondyloarthropathies, systemic sclerosis, idiopathic inflammatory myopathies, Sjogren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia, autoimmune or immune-mediated skin diseases including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, lymphadenopathy, splenomegaly and leukopenia. The present sequence represents a human PRO polypeptide DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 200
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Abbas
Wu TD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immune disorder; PRO; Antiinflammatory; Dermatological;
Immunosuppressive; Antirheumatic; Antiarthritic; Osteopathic;
Muscular-Gen.; Vasotropic; Antianemic; Antipsoriatic; Immunos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-MAR-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-MAR-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO2005051988-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human PRO polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AEA23691
                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GETH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2005-417958/42
)B; AEA23692.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens
                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P
                                                                              61
                                                                                                             61
                                                                                                                                             GENENTECH
                                                                                                                                              GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC
                                                                                                                                                                 GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCCGGTAGAC
                                                                                                                                                                                                                                                                          3380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                 CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACATTTCACCTGTCCCGCAGACAA
                                                                               CCTGCTTCT
                 Bodary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    c acid encoding PRO polypeptide, useful for diagnosing and n immune related disorder, e.g. systemic lupus erythematosus, arthritis, osteoarthritis, autoimmune hemolytic anemia, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2003US-0451884P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2004WO-US006460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                        BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    တ
                                                                                                                                                                                                                                                                          1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Clark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      233;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                         A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                                                                                                                                                                                                                          644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     966pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ή,
                                                                                                                                                                                                           0;
                                                                                                                                                                                                        Score 3365; | Pred. No. 0; | Mismatches
                                                                                                                                                                                                                                                                         ũ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schoenfeld
                                                                                                                                                                                                                                                                          753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     English.
                                                                                                                                                                                                                                                                          <u>ი</u>
                                                                                                                                                                                                                                                                          830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ū,
                                                                                                                                                                                                                                            DВ
                                                                                                                                                                                                                                                                         Ţ;
                                                                                                                                                                                                                                           14;
                                                                                                                                                                                                           .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Williams
                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                          Ų;
                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PM,
                                                                                                                                                                                                                                            3380;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wood
                                                                                                                                                                                                           0
                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WI;
                                                                                                             120
                 180
                                                 180
                                                                               120
                                                                                                                                              60
                                                                                                                                                                               60
                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                             S
                                                                                                                                                                                     Ś
                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       몂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              명
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
S
                                                                                             밁
                                                                                                                        S
                                                                                                                                                              g
                                                                                                                                                                                                                                                                                            961
                                                                                                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                                                                           901
                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                       GATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTAT
                                                                                               ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAG 1200
                                                                                                                                                                                                                                             GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAGCATCCCCGGAGCCA 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CIGGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCTCT 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAAGTGTCAGCT
                                                                                                                                                                                                                                                                                                               GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACAT
                                                                                                                                                                                                                                                                                                                                                                             TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTTCAGAATCAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGAGAGCTACTAAAAAGGATTGTGCAGAAAAGAAAACTGGTTCTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCTCT
   AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATT
                                                                                                                                                                  CAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGA
                                                                                                                                                                                                                                                                                             TAGATGAAAGTCTTGGACATAACAGCAACAT
                                                                                                                                                                                                                             AGCAAGAGC
                                                                                                                                                                   GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ĠĠĀĀĠĀĠĊĀĀĊTT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGATTGCTCAGAA 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTTCTGAATGTT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGGAACTGTTG
                                                                                                                                                                                                                              ATCCCCGGAGCCA 1080
                                                                                                                                                                                                                                                                                                                          GGCAGTGATTCA 1020
     TTTGAAGAAATGG 1320
                                                                                                                   TTACATTGCCAAG 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGATTGCTCAGAA 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAGGAACTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTTCAGCCCACT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTGCTGCTGAGC 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAGGTGAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAGGTGAAGGAG 300
                                    AGTTCTTGTCAAT 1260
                                                                                                                                                                                     GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                             GGCAGTGATTCA 1020
                                                                                                                                                                                                                                                                                                                                                              AAGTTTGGCAGAA 960
                                                                                                                                                                                                                                                                                                                                                                                     AAGTTTGGCAGAA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTTCAGCCCACT 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTGCTGCTGAGC
                                                 AGTTCTTGTCAAT 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
```

. 2	8 8	8 8	B 8	g 8	용왕	g &	용 성	A 4	A A	8 8	용 상	유 성	8	g 9	8 8	₽ 8	유 성	дb
2341 ACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAATGAAAAATTT 2400 	281 AGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATI 	221 AAAA 221 AAAA	1	101	041 041	2 2 2 2	921 ATGGAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG 1 	861 TGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA 192 	18	741 CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 18 	1681 CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAGAAAAC 1740 	a a	In In	in in	1441 GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCATTATCATTGATGAA 1500 	1381 AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCCCTCTTAAACTTG 1440 	1321 TATCGTGTTATTGGATTAAGTGGTGATACCCCAACTGAAAATATCATTTCCAGAAGTTGTC 1380 	
											-							
RESULT S AEA36113	Db) B &	ב אל מ	Q	Q B 4	9 B 4	? B &	S B 7	5 8 7	S B 8	א אם אס אם אס	S B &	B B &	S B 8) B .	o B .	S B 4	g g
3 5	3361 CTCTG 3365 3361 CTCTG 3365	301 TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAAATGATTGTTTTA 3	241 GATTAGCACTTGATGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTA. 241 GATTAGCACTTGATGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTA.	181 GAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTATTTA	181 CARTTTACCTATCACATTTCCAAAAATAATTCACAAAAAGAAACAATACAAAAAGTGGGTA	ATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAATA	001 AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAAATGT	941 AAAATGCATCAAATATGACCCCAGAATTCAAGGAACTTTACATTGTAAGAGAAAAAC			761 ANACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG 282	ACAGTTAATGATTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTATAAAATATG	641 GCTGATGAGGAGCACCTACGTCCTGGTTGCTCACAGGTGGTTCAGGAGTTATCGAACATGAG	501 ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGAC	521 CTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTT 521 ATCCCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTT	461 CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATCAAT 2		CACGACAGAGTGCATATGCGCTTTCCCCAGTGGATTACTGAAAAN

```
The invention relates to a method of screening for nucleic acid molecules CC that show altered expression in a first cell sample comparing comparing comparing comparing the sample with that of a second reference comparing the presence of butyrate is directly or indirectly but the reference sample has been grown in the presence of butyrate comparing the intrinsic providing at least one nucleic acid molecule associated with the comprising providing a biological sample comprising at least one cell to be tested, contacting the sample with a ligand (preferably a hybridizing comprising the presence of at least one nucleic acid and content one cell to detecting the presence of at least one molecule in the sample a hybridizing condition of detecting the presence of at least one molecule in the sample, a method condition of detecting at least one polypeptide associated with the initiation of a biological sample comprising at least one cell to be tested, contacting the presence of the polypeptide in the sample, a method condition of at least one polypeptide or a variant polypeptide comprising conjugation of colorectal cancer in an animal comprising the presence of the polypeptide in a variant polypeptide comprising conjugation of a least one addition, deletion or substitution of at least one addition, deletion or substitution and/or progression of colorectal cancer a variant polypeptide comprising consist that modulate the activity of at least one polypeptide comprising a preparation comprising at least one conjugate that the initiation and/or progression of colorectal cancer. The agent with the initiation or substitution and at least one agent to consist one deletion or substitution and at least one agent to consist one conjugate that the activity of the agent with respect to continuous conjugate that the activity of the agent with respect to continuous conjugate that the activity of the agent to consist one conjugate that the activity of the agent and an activating or conjugate that the conjugate conjugate conjugate co
         Screening; gene expression; colorectal tumor; colit irritable bowel syndrome; gastrointestinal disease; gastrointestinal-gen.; antiinflammatory; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Corfe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-DEC-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       03-DEC-2004; 2004WO-GB005078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cells grown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO2005054507-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYSH-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2005-435407/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     UNIV SHEFFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for nucleic acid molecules exhibiting altered expression in wn in the presence of butyrate, and detection of the nucleic cules or the encoded polypeptides in diagnosing colorectal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chirakkal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2003GB-00028048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        266pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      colitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          is; Crohns c
cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               នន្តន្តន្ត្
                                                                   S
                                                                                                밁
                                                                                                                          ş
                                                                                                                                                    밁
                                                                                                                                                                          Ś
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 3365; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       irritable bowel an assay for col-
cancerous growt identified by th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                   781
                                                                                                                                                      721
                                                                                                                                                                             721
                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3380
                      TCAGAATCATCTTTTGCAGATTCT
       for colon growth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
larity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8P;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               >
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                753
```

syndrome, as a screening tool for fiber lon microflora functionality or for early th. This sequence represents a human nuche screening method of the invention. Score 3365; Pred. No. 0; Mismatches G; 830 BB Ή. 14; <u>,</u> 0 Ç, Indels Lengi 0 ဝ္ ther; consumption, as y detection of pre leic acid :h 3380; 0; Gaps 0

CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACACTTTCACC; GCGCGCCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCA ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA 660 CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACC: AGAACCGGCAGCCCTCTGGCCCGCCGCTACATGAACCCCTGAGCTCAC ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCG: TACATCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTCTGCCTG TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGG CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACC GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGC CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGGCA: AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAG CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTV AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTG AGAGAGCTÀCTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTG **ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAA** CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGG CCATCGTTTGAGAACGCTCATGATGATATCTCCAACTGCTGAACC TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGG CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCT CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGG/ CGCCCGCTACATGAACCCTGAGCTCA TGGAAGAGCAACTT CATTTCTGAATGTT CGGACTTGCCCTCT rggagaataactca CTGATTGCTCAGAA 780 GGAGAATAACTCA 900 GGAGGAACTGTTG GGAGGCCCTCCGG GGAGGCCCTCCGG ACTECTECTEAGE :CAGGGTGAAAATG |||||||||||| GATGTCGAATGGG 180 GTCCCGCAGACAA GTCCCGCAGACAA 120 CAGAGCGGTAGAC CAGAGCGGTAGAC 60 TGAATCAGGTGTA GGAGGAACTGTTG CCTTCAGCCCACT CCTTCAGCCCACT ACTGCTGAGC AGAGGTGAAGGAG 300 CAGGGTGAAAATG 120 480 60 900 840 720 540 540 480 420 420 360 300 240 840 720 660 600 600 360 240 180

AAGTTTGGCAGAA

90	AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATACT 2040	B 8
061 GGCCAGGCTTGGGGAACAATGATGG	ATGGAAAAAAAGCTGCAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG 1980	Db dd
61	1861 TGTCAAATGAGTCCAAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA 1920	Db Qy
881 TTCCTT 881 TTCCTT	60	유 성
821 821	OY 1741 CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 1800 1741 CTTGATCAACTGAAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 1800	95 P
761 AAACCAGAGGAGTATGCTCATAAGATTTTGGAATT 	CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAGAAAAC 1740	유 성
701 ACAGT	CTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCAAAGCCAAAGCTGAAGAA 1680	₽ &
641 GCTG	AAGTTGAAAAACAATAGACTCAAGAAAGAAAACAAACCAGTGATTCCCCCTTCCTCAGATA 1620 	ያ
581 ATCCGTTATGGT	TGTCATCACCACCAACAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAG 1560	유 왕
521 CIGCTTATCGCTACCACAGT	GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTTCCCTCATTATCATTGATGAA 1500	유 상
*61 CCCATGACACAGAATGAACAAAAAAGAAGTCATTA 461 CCCATGACACAGAATGAACAAAAAAGAAGTCATTA	AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCCCTCTTAAACTTG 1440	용 성
401 GCTGAAGTAGGAGTCAAAG	TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATTTCCAGAAGTTGTC 1380	음 성
341 ACAAAAACACGACAG	AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAAATGG 1320 	8 8
GAAATAC	GATCACTTAGACAAGAAGAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAAT 1260 	용 <i>첫</i>
221	ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAG 1200	B &
161	GAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	B &
101 AGTG	GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAGCATCCCCGGAGCCA 1080	유 성
041	GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATGGGCAGTGATTCA 1020	95 64
2041 CATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTT	901 TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAGAA 960	B

Qy Ma	ន្តន្តន្តន្តន្ត	XX PPT	X R X F	Z X Z X Z	X P X	8 X Y X 8	2 X Z X Z	ZZX	ZX TX			8	B 8	B &	₽ ₽	δ 8	ς γ
ery Match 99.9%; Score 3361.8; DB 14; Length 3434; set Local Similarity 99.9%; Pred. No. 0; stches 3363; Conservative 0; Mismatches 2; Indels 0; Gaps 0; 1 GCGCCCCGGCCTGAGAGCCCTGTGGACAACCTTCGTCATTGTCAGGCACAGAGCGGTAGAC 60	The invention relates to an isolated nucleic acid encoding a PRO polypeptide. The polypeptide, agonist or an antagonist, antibody, composition, and method are useful for diagnosing and treating an immune related disorder, e.g. systemic lupus erythematosus, rheumatoid arthritis. The present sequence represents a PRO polypeptide. Sequence 3434 BP; 1157 A; 673 C; 768 G; 836 T; 0 U; 0 Other;	an immune related disorder, e.g. systemic lupus erythematoid arthritis, osteoarthritis, thyroiditis, or diabetes mell SEQ ID NO 3369; 158pp; English.	2005-182330/19.	Σ 7	-AUG-2004; 2004WO-US026	WO2005016962-A2.	ide; Gastrointestinal-Gen.; Antipsoriatic; Anti allergic; ds; gene; diagnosis.	iconing a roo portypeptine, one in no log iflammatory; Immune disorder; Dermatolog neumatic; Antiarthritic; Osteopathic; He	AY-2005 (first entry)	717563 ADY17563 standard; DNA; 3434 BP.	3361	361 CTCTG 3365	3301 TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA 3360 	3241 GATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTA 3300	181 GAATTACCTATCACATTTCCCCAATCTTGACTATTCAGAATGCTGTTTATTTA	324	121 AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATACAAAAAGTGGGTA 31.
- עס עס ממ	2	Q B Q	Qy dd	Qy dd	dd VQ	99 80	Qy Db	Qу Оъ	Оу	Qy dd	dy dy	da S	S B	γQ	F &	Db	당 당
0 < 0 .		~ 0 ~	0 4	0 4	0 <	0 <	0 4	0 4	0 4	0 ~	0 ~	0 -	. 0		, ~	0 -	, 0
07	55 TCAGAATCATC 61 GGAAGTGTCAG 61 H 15 GGAAGTGTCAG	841 CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGAGGTCTGGGGGCATGAGAATAACTCA	35	TTGTCCAAGAGTTAA TTGTCCAAGAGTTAA	661 AGAGAGCTACTAAAAAGGATTGTGCAGAAAAGAAAACTGGTTCTCTGCATTTCTGAATGTT	601 - ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA 	541 CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAGGAACTGTTG	481 CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCC	421 AGAACCGGCAGCCCTCTGGCCGCCCCCCTACATGAACCCCTGAGCTCACGGACTTGCCCCTCT	1 ACCTTGGAGAAG 	301 CAGATTCAGAGGACAGTCGCCACCTCCGGGAACATGCAGGCAG	9	SCACAGACGAGAATTTCCGCTATCTCATCTCGTGCT PCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTC	81 TATTCCACAG	121 CAGCACCATCTGCTTGGGAGAACCCTCTCCCTTCTCTGAGAAAGAA	5 ccrecrrere)CTGAGAGCCCTGTGGACAACCTCGTCATTC TAAGTGGGCAGCGGACAGCGGCACGCACAT

B 8	B 8	g &	dg dg	dg VQ	B 8	D Q	99 99	B &	g 49	B &	B &	용 성	B 8	g 99	d Q	g 99	04 VQ	
2161 AAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTTGAAAACAAT 2220 	2101 AGTGATGAGGGTGGTGATGAGTATTGTGATGGTGATGAAGATGAGGATGAT	2041 CATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGAT 2100 	1981 AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATA	1921 ATGGAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG 1980 	1861 TGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA 1920 	1801 ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTAT 1860 	1741 CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 1800 	1681 CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAAAAC 1740 1735 CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAGAAAAC 1794	1621 CTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCCAAGCCAAAGCTGAAGAA 1680 	1561 AAGTTGAAAAACAATAGACTCAAGAAAAGAAAACAAACCAGTGATTCCCCTTCCTCAGATA 1620 	1501 TGTCATCACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAG 1560 	1441 GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTTCCCTCATTATCATTGATGAA 1500 	1381 AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCCCTCTTAAACTTG 1440 	1321 TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATTTCCAGAAGTTGTC 1380 	1261 AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAAATGG 1320 	1201 GATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAAT 1260 	1141 ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAG 1200 	
Орь	OV B 4	S B 8	P &	? B &	Q	D 5	ב מ	S B 8	S B &	D 5	S B &	B &	}	S & &	ם ג <u>י</u>	0 B 8	}	 ?
	235 GAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTATTTA	21 AGGAAIIIIGIAGIGGIIIICAAAAAIAAIICAACAAAGAAAC 	115 GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAATA	OUI AAAGCACTGCAAAAGAAGTGTGCCACTATCAAATAAATG	941 AAAATGCATCACGICAATATGACCCCAGAATTCAAGGAACTTTACATIGTAAGAGAAAAC 3	935 TICCTITGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAATTGAG 2	875 ANANTGANANCCANGAGANATATTGCCANGCATTACANGANTANCCCATCACTANTANCT 2	815 AAACCAGAAGGAATATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG 2	ACAGTTAATGATTICCGAGAGAAGATGATGATGTATAAAGCTATAAAGATGAATGA	691 GLIGALGAGGAGCACCIACGICCIGGIIGCICACAGIGGIICACGAGIIGIIIAICGAACAIGAG 27 695 GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG 27	S81 ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA 26		461 CCCAIGACACAGAAIGAACAAAAAGAAGICATIAGIAAAIIICGCACIGGAAAAAAICAAI 232		395 ACADADACACGACAGAGTGCATCACCACTTCCCAGTGGATTACTGAAAAATGAAAAATTT 24		221 AAAATGITGAAAAAGGTGGCTGAAAACCCAGAATATGAAAATGAAAAGCTGACCAAATTA 22	000 THE TANK

Db Qy Db Ay Ma	\$ X O O O O O X &	g X G X G X G X G X X G X X G X X G X X G X X G X X G X X G X G X G X X X G X X X G X	XX Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X Q X X X Q X X X Q X X X Q X X X Q X X X Q X X X Q X X X X Q X X X Q X	ACC XX ACC XX ACC XX X	D Q D
Query Match 99.9%; Score 3361.8; DB 14; Length 3434; Best Local Similarity 99.9%; Pred. No. 0; Matches 3363; Conservative 0; Mismatches 2; Indels 0; Gaps 0; 1 GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC 60	Claim 1; SEQ ID NO 6182; 158pp; English. The invention relates to an isolated nucleic acid encoding a polypeptide. The polypeptide, agonist or an antagonist, antibo composition, and method are useful for diagnosing and treating related disorder, e.g. systemic lupus erythematosus, rheumatoi arthritis. The present sequence represents a PRO polypeptide. Sequence 3434 BP; 1157 A; 673 C; 768 G; 836 T; 0 U; 0 Other;	(GETH) GENENTECH INC. Abbas A, Clark H, Ouyang W, Williams MP, Wood WI, Wu TD; WPI; 2005-182330/19. New nucleic acid encoding PRO polypeptide, useful for diagnosing and treating an immune related disorder, e.g. systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, thyroiditis, or diabetes mellitus.	ds; gene; diagnosis. 2. 0004WO-US026249.	; DNA; 3434 BP. st entry) O polypeptide, Immune disorde tiarthritic; Os diabetic; Nephr ntestinal-Gen.;	
D Q D Q D Q D Q D Q D Q D Q D Q D Q D Q	Q	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Q B Q B Q B	S B S B S B S	0 0 0 0 0 0 0
1075 GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAGACATCCCCGGAGCCA 1134 1081 GAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	01 TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAGAA 9	9 4 9 7	TGGTGGAAAACAAGCTTCTAGTTAGAGACCTCCTGGATAAGTGCATGGAGAGGAGATGGAGACAATGGAAACCAGGAGAAACCAATGGAAAACCAATGGAAATGAATG	61 ACCTTGGAGAAGGAGTCTGGCACCTTGGTTGGACTCGGGA	241 TACATCCAGGIGGAGCCTGIGCTGGACTACCTGACCTTTCTGCCTGCAGAGGIGAAGGAG 300

ર્શ

밁

ACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAATGAAAAATTT 2400	GAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTT 2340	SCTGAAAACCCAGAATATGAAAATGAAAAGCTGACCAAATTA 2280	AACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAAACAAT 2220	AGGGTGGTGATGAGTATTGTGATGGTGATGAAGATGAGGATGAT	BAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGAT 21 	GGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATACT 204 	TGCAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG 19 	IGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA 192 	BAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTC 	QY CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 1800	VAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAGAAAAC 17 	CTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCAAGC	TTGAAAAACAATAGACTCAAGAAAGAAACAAACCAGTGATTCCCCCTTCCTCAGATA 16 	GTGTATAATAACATCATGAGGCATTATTTGATGCAG 1560	AGACTTTTCCCTCATTATCATTGATGAA 1500	1440 1494	GTC 1434
LT 8 1892 ACN91892 standard; DNA; 3928 BP. ACN91892;	3415 CTCTG 341	3301 TGATTAATGTATTCATTAIGCTACGAACTGACATAAGAATCAATAAAATGATTGTITIA 3360	241 GATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTA	JACTATTCAGAATGCTGTTTATTTAGTGATGAG 3	3121 AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATACAAAAAGTGGGTA 3180 	3061 GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAATA 3120 	3001 AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGT 3060 	2941 AAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATTGTAAGAGAAAAAC 3000	2881 TTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAATTGAG 2940	2821 AAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCATCACTAATAACT 2880	761 AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG	2701 ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG 2760	641 GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG 2	581 ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA 2	521 CTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTT [*61 CCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATAAAT	201

S

```
Ş
                                       5
                                                               밁
                                                                                     á
                                                                                                           밁
                                                                                                                             5
                                                                                                                                                       밁
                                                                                                                                                                            Ş
                                                                                                                                                                                                    밁
                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 3362; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel isol detecting
                                                                                                                                                                                                                                                                                                                                                   The invention relates to an isolated polypeptide (I) associated with breast cancer which is encoded by a nucleic acid molecule comprising a nucleotide sequence (S1). Further disclosed is an antibody that binds to the polypeptide of the invention. The activity of the polypeptide of the invention may be described as cytostatic. The antibody is useful for detecting the presence of (I) in a sample. Nucleic acid molecules of the invention are useful in the detection of breast tumours. (I) is useful as a marker for breast cancer and in breast cancer therapy. Sequences given in records ACN78851-ACN92934 represent nucleic acid markers associated with breast cancer. Note: The sequence listing does not form part of the specification but may be obtained in electronic format from the USPTO web site at seqdata.uspto.gov/sequence.html?DocID=20030099974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lillie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18-JUL-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cancer;
                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US2003099974-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MILL-) MILLENNIUM PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens
361
                      743
                                          301
                                                                                                             623
                                                                                                                                  181
                                                                                                                                                                             121
                                                                                                                                                                                                    503
                                                                                                                                                                                                                                               443
                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ų,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  breast;
                                                                                                                                                                                                                                                         GCGCGCCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCCGGTAGAC
                                                                                                                                                      3928 BP; 1285
                                 TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATG
                                                                                                                                                                                                                CCTGCTTCT
 ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lated polypeptide associated with breast cancer, presence of polypeptide in sample, as a marker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xu Y,
                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2001US-0306220P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002US-00198846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wang
                                                                                                                                                                                                              CTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACCTGTCCCGCAGACAA
                                                                                                                                                                                                     CTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACCTGTCCCGCAGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NO 13042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            entry)
                                                                                                                                                                                                                                                                                                   99.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      marker,
                                                                                                                                                                                                                                                                                                                                   ð.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cytostatio;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INC
                                                                                                                                                                                                                                                                                                                                  826 C; 895 G; 917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Steinmann
                                                                                                                                                                                                                                                                                        Score 3360.2;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     вeq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        įd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   marker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13042
                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                    T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   detection;
                                                                                                                                                                                                                                                                                         <u>٠</u>
                                                                                                                                                                                                                                                                                                               11;
                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                    5 Other;
                                                                   GCAGAGGTGAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 therapy;
                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                             180
                                                                                                                                                                                                                         120
                                           360
                                                                  742
                                                                                       300
                                                                                                              682
                                                                                                                                  240
                                                                                                                                                          622
                                                                                                                                                                                                     562
                                                                                                                                                                                                                                               502
                                                                                                                                                                                                                                                                     60
  420
                       802
                                                 S
                                                                                              Ş
                                                                                                                                        δ
                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                             dd
                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                 В
                                                                           뭥
                                                                                                                      밁
                                                                                                                                                                   멂
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                     1463
                                                                              1763
                                                                                                                         1703
                                                                                                                                                                    1643
                                                                                                                                                                                                               1583
                                                                                                                                                                                                                                                          1523
                                                                                                                                                                                                                                                                                1081
                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                1403
                                                                                                                                                                                                                                                                                                                                                                                          1343
                                                                                                                                                                                                                                                                                                                                                                                                                                      1283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1043
                                                                                                                                              1261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1103
                                                                                                                                                                                                                                                                                                                                                                     961
                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                          841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              803
                                                                                                                                                                                                                                                                                                                                                                                                      TCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTG(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCA
            GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACT
                                 AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTV
                                                                              TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATT
                                                                                                                                                                                         GATCACTTAGACAAGAAGAAAAAGCATCTGAGCCTGGAAAAGTTAI
                                                                                                                                                                                                                              ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTG
                                                                                                                                                                                                                                                                      GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAG
                                                                                                                                                                                                                                                                                                                GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAG
                                                                                                                                                                                                                                                                                                                                                 GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACA
                                                                                                                                                                                                                                                                                                                                                            GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACA'
                                                                                                                                                                                                                                                                                                                                                                                           TCAGAATCATCTTTTGCAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCATCGTTTGAGAACGCTCATGATGATATCTCCAACTGCTGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCT
                                                                                                                                     AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATT
                                                                                                                                                                     GATCACTTAGACAAGAAGAAAAAGCATCTGAGCCTGGAAAAGTTA
                                                                                                                                                                                                                                                           GAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCT(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCCTGAGCTCA(
                                                                                                                                                                                                                                                                                                                                                                                             CTTCTGTAGTTTCAGAATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGAATCAGGTGTA 1102
                                                                                                                                                                                                               TTACATTGCCAAG 1200
                                                                                                                                                                                                                                                                                                                 ATCCCCGGAGCCA 1080
                                                                                                                                                                                                                                                                                                                                                                                                        AAGTTTGGCAGAA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGAATCAGGTGTA 660
 TATCATTGATGAA 1500
                                                                                                                         TTTGAAGAAATGG 1320
||||||||||||
TTTGAAGAAATGG 1762
                                                                                                                                                                                                                                                          GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                                                                                             GGGCAGTGATTCA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAAGAGCAACTT 840
|||||||||||||
GGAAGAGCAACTT 1282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGGAACTGTTG 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTTCAGCCCACT 540
                                     CCTCTTAAACTTG 1882
                                                                               TCCAGAAGTTGTC 1822
                                                                                             TCCAGAAGTTGTC 1380
                                                                                                                                                                    AGTTCTTGTCAAT 1260
||||||||||
AGTTCTTGTCAAT 1702
                                                                                                                                                                                                                                                                                                       ATCCCCGGAGCCA 1522
                                                                                                                                                                                                                                                                                                                                                  GGGCAGTGATTCA 1462
                                                                                                                                                                                                                                                                                                                                                                                             AAGTTTGGCAGAA 1402
                                                                                                                                                                                                                                                                                                                                                                                                                                      ĠĠĀĠĀĀŤĀĀĊŤĊĀ 1342
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAGAATAACTCA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGATTGCTCAGAA 1222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGATTGCTCAGAA 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTTCTGAATGTT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGACTTGCCCTCT
                                                CTCTTAAACTTG 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     922
```

Ś

멍 Ś

S

2521 CTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTT 2580	461 CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAA 	01 GCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACA	341 ACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAATGAAAA 	281 AGAAATACCATAATGGAGCAATATACTAGGACT	221 AAAATGTTGAAAAGGCTGGCTGAAAACCCAGAA 	161 AAACCTTTGAAACTGGATGAAACAG 	ggtgatgaagatgaggatg 	2041 CATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGAT 2100 	1981 AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATACT 2040 	921 ATGGAAAAAAAGCTGC 363 ATGGAAAAAAAGCTGC	861 TGTCAAATGAGTCCAATGTCAGATTTT	801 ACCAGAGAAGATCCATTTAAAGAGAACTTCTAGAAATAATGACAAGGATTCAAACTTAT	1741 CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA 1800 	681 CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAA	621 CTGGGACTAACAGCTTCACCTGGTGTTGGA	561 AAGTTGAAAAACAATAGA 	501 TGTCATCACACCAACAAAGAAGCAGTGTATAATAACI
		• .										<u> </u>				· · · · · · ·	
PN XX S	X Z X B i	S X E X	RESU ADNO ID	Db 43	S B 8	ου γο	р V2	S & &	}	S B 8	р 8 8	? B .	} B &) B (S B 8	5 B 8	S & &
Homo sapiens. WO2004028479-A2.	Antipsoriatic cDNA sequence #654. ds; gene; antipsoriatic; gene therapy; psoriasis; diagnosis.	ADN04879; 01-JUL-2004 (first entry)	SULT 9)NO4879 ADNO4879 standard; cDNA; 3379 BP.	3803 CTCTG 3807	3301 IGATTAATGTATICATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA 3 3743 IGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA 3 3743 IGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA 3	3241 GATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTA 3	3181 GHALLACCIAL CACALITIC CHARLET GACIAL CHORAL GALLACTER GALLACT	3121 AGGAATITIGIAGIGGIIIICAAAAATAATTCAACAAAGAAACAATACAAAAAAGTGGGTA 3 3563 AGGAATTTTGTAGTGGTTTTCAAAAAATAATTCAACAAAAGAAACAATACAAAAAAGTGGGTA 3	3051 GCCAGGCIIGGGGAACAAIGAIGGIGCACAAAGGCIIAGAIIIGCCIIGICIIGICIICAAAAATA 3 3503 GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAAATA 3		3383 AAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATTGTAAGAGAAAAC 3	3323 TTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAATTGAG 3	821 AAAATGAAAACCAAGAAATATTGCCAAGCATTACAAGAATAACCCATCACTAATAAC 	3203 AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAAGTATAATGGAAAAG 3	3143 ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAAATATG 3	3083 GCTGATGAGAGAGAGAGAGAGAGAGAGAGAGTGATAGAGAGTGATTATCAAAAATATGAGAGAGA	3023 ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCACGAGGCCCGTGGTCGACCAGGCCAGG

2640
3082
2700
3142
2760
2760
3202
2820
3262
2880
33262
2940
33442
3362
3362
3362
33742
33742
33682

유

ఠ Ś 망 뭥. Ś

밁

뭥

밁

멍

ঠ

B

ঠ

Ś

```
$\times \times \
                                                                                                                                                                                                                          ર્
                                                                                                                                                                                                                                                         멂
                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                    망
                                                                              ક
                                                                                                          дb
                                                                                                                            ર્
                                                                                                                                                     유왕
                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 3364; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New PRO nucleic of pharmaceutical commammal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to novel polynucleotide and polypeptides for treating psoriasis or a sequence having at least 80% identity to the above sequences. The nucleic acid is useful for preparing a composition for diagnosing or treating psoriasis in a mammal. This sequence corresponds to one of the polynucleotides of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bodary
Wu TD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2004-305105/28
P-PSDB; ADN04880.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GETH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-SEP-2002;
                                                           481
                                                                                  481
                                                                                                           421
                                                                                                                                   421
                                                                                                                                                                                361
                                                                                                                                                                                                           301
                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>ა</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENENTECH
                                                                                                                                                                                                                                                                                                                                                                                                          CCTGCTTCTCTAAGTGGGCAGCGGACAGCCGCACGCACATTTCACCTGTCCCGCAGACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCGCGCCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3379
                                                           SEQ
                                                                                                             AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCCTCT
                                                                                                                            AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002US-0414006P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2003WO-US030907.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP; 1152 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             c acid or p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ï,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1273;
                                                                                                                                                                                                                                                            99.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jackman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polypeptide, useful : on for diagnosing or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3069pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            644 C; 753 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 3353; D
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schoenfeld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            830 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for preparing a
c treating psoriasi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>Ч</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Wood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΨI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ω
                                     600
                                                           540
                                                                                    540
                                                                                                             480
                                                                                                                                    480
                                                                                                                                                            420
                                                                                                                                                                                    420
                                                                                                                                                                                                             360
                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
            600
                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                 음 성 음 성
                                                                                                                                                                                                                                                                                                                                                                                       장 유
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  요
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
5
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
& 음
                                        중 유
                                                                                           중 음 중
                                                                                                                                                                  g
                                                                                                                                                                                       $
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                         1560
                                                                                                 1561
                                                                                                                                                 1501
                                                                                                                                                                          1441
                                                                                                                                                                                                1441
                                                                                                                                                                                                                          1381
                                                                                                                                                                                                                                                1381
                                                                                                                                                                                                                                                                          1321
                                                                                                                                                                                                                                                                                                                         1261
                                                                                                                                                                                                                                                                                                                                                                        1201
                                                                                                                                                                                                                                                                                                                                                                                                  1201
                                                                                                                                                                                                                                                                                                                                                                                                                         1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                        GATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                       ATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAG(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGTTGAAAAACAATAGACTCAAGAAAGAAAACAAACCAGTGATTCC
                                                                                                                        TGTCATCACACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCI
                                                                                                                                                                          GAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCAJ
                                                                                                                                                                                                                         AAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGCAA
                                                                                                                                                                                                                                                                                                                                       AAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGAGCTACTAAAAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAGAGCTACTAAAAAGGATTGTGCAGAAAAGAAAACTGGTTCTCTG
  CACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAA
                                                                                                                                                                           TATCATTGATGAA 1500
   CTGTTAAAGAAAAC 1740
                                                                          CCCTTCCTCAGATA 1620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAGAATAACTCA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGAATCAGGTGTA 660
                           CAAAGCTGAAGAA 1679
                                                                                                                                                                                          TATCATTGATGAA 1500
                                                                                                                                                                                                                                                                           TCCAGAAGTTGTC 1380
                                                                                                                                                                                                                                                                                            TCCAGAAGTTGTC 1380
                                                                                                                                                                                                                                                                                                                                                                                                                           TTÁCATTGCCÁÁG 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAAGAGCAACTT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAAGAGCAACTT 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTTCTGAATGTT 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGAATCAGGTGTA
                                       CAAAGCTGAAGAA 1680
                                                                                                                            TTATTTGATGCAG 1559
                                                                                                                                      TTATTTGATGCAG 1560
                                                                                                                                                                                                                            CCTCTTAAACTTG 1440
                                                                                                                                                                                                                                            CCTCTTAAACTTG 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAAGGGAAGAAT 1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCCCCGGAGCCA 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATCCCCGGAGCCA 1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGCAGTGATTCA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGTTTGGCAGAA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTTTGGCAGAA 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGAATAACTCA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGATTGCTCAGAA
                                                                                                                                                                                                                                                                                                                           TTTGAAGAAATGG 1320
                                                                                                                                                                                                                                                                                                                                                                           AGTTCTTGTCAAT 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCAGTGATTCA 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGATTGCTCAGAA 780
                                                                                                                                                                                                                                                                                                                                                                                      AGTTCTTGTCAAT 1260
                                                                                                                                                                                                                                                                                                                                                                                                                                       TTACATTGCCAAG 1200
                                                                                                                                                                                                                                                                                                                                                TTGAAGAAATGG 1320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
```

S

S

뮍 5 밁

```
멍
                                                                                            음 성
                                                                                                                      음 성 음
                                                                                                                                                          5
                                                                                                                                                                         유
                                                                                                                                                                                                 뫄
                                                                                                                                                                                                               5
                                                                                                                                                                                                                              음 성
                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                      ち 음 성
                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                    8
                    В
                              ð
                                          음 성
                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                        8
       S
                                                                                                                                                                                                                                                                                                                                                                                                                                            1740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1680
                                                                                                                                      2461
                                                                                                                                                   2400
                                                                                                                                                               2401
                                                                                                                                                                                                                                                          2160
                                                                                                                                                                                                                                                                      2161
                                                                                                                                                                                                                                                                                   2100
                                                                                                                                                                                                                                                                                                                                      .
1980
                                                                                                                                                                                                                                                                                                                                                                1920
                                                                                                                                                                                                                                                                                                                                                                                                                   1800
                                                                                                                                                                                                                                                                                                                                                                                                                               1801
        2761
                                              2640
                                                                                                             2521
                                                                                                                                                                                                       2280
                                                                                                                                                                                                                    2281
                                                                                                                                                                                                                                              2221
                                                                                                                                                                                                                                                                                                2101
                                                                                                                                                                                                                                                                                                                                                                                         1860
                                                                                                                                                                                                                                                                                                                                                                                                     1861
                                                                                                                         CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAAATCAAT
                                                                                                                                                                             CATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGAT
                                                                                                                                                                                                      AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGAGTATACT
                                                                                                                                                                                                                                                                                                                                                                ATGGAAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG
                                                                                                                                                                                                                                                                                                                                                                                                TGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                  ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG
                    ACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG
                                             GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG
                                                                       ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA
                                                                                                GCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA
                                                                                                                                                          GCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCA
                                                                                                                                                                                                                                                                                                                                                                                                     1920
                                                                                                                                                                                                                                                                                                                                                                                                                               1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1800
                                                                                                                                                               2460
                                                                                                                                                                                                                                              2280
                                                                                                                                                                                                                                                                      2220
                                                                                                                                                                                                                                                                                                                                                                                         1919
                                                                                                                                                                                                                                                                                                                                                                                                                  1859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1739
        2820
                                                           2700
                                                                       2639
                                                                                     2640
                                                                                                                                      2520
                                                                                                                                                    2459
                                                                                                                                                                              2399
                                                                                                                                                                                          2400
                                                                                                                                                                                                                   2340
                                                                                                                                                                                                                                 2279
                                                                                                                                                                                                                                                          2219
                                                                                                                                                                                                                                                                                    2159
                                                                                                                                                                                                                                                                                                             2099
                                                                                                                                                                                                                                                                                                                          2100
                                                                                                                                                                                                                                                                                                                                       2039
                                                                                                                                                                                                                                                                                                                                                   2040
                                                                                                                                                                                                                                                                                                                                                                1979
                                                                                                                                                                                                                                                                                                                                                                             1980
                    2759
                                                                                                             2580
                                                                                                                          2519
                                                                                                                                                                                                       2339
                                                                                                                                                                                                                                                                                                2160
```

5

Early detection of soft

tissue sarcoma

comprises

```
RESULT 10
ADQ2237
ID ADQ22
XX
AC ADQ22
XX
AC ADQ22
XX
BOE Human
XX
Soft
XW
GS
HOMO
XX
HOMO
XX
PN
HOMO
XX
PN
FO
10-JU
XX
PR
26-NC
XX
PR
26-NC
XX
PR
XX
PR
A (PROT
XX
PR
BA (PR
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                               26-NOV-2003; 2003WO-US038193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADQ22237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADQ22237
                                                                                                                                                                                                                                            10-JUN
                                                                                                                                                                                                                                                                                WO2004048938-A2
                                                                                                                                                                                                                                                                                                                                                                                                                        Human soft tissue sarcoma-upregulated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-AUG-2004
                                        WPI; 2004-441208/41
                                                                                                                                                             26-NOV-2002; 2002US-0429739P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2760
                                                                                                                                                                                                                                                                                                                                                                              tissue
                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                       PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATTAGCACTTGAATTGAAGATTCTTTTAAAATACTATCAGTTAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAC
                                                                               Ginsburg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAAATGAAAACCAAGAAATATTGCCAAGCATTACAAGAATAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCATCACTAATAACT 2880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAA
                                                                                                                                                                                                                                                                                                                                                                                  sarcoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3365
                                                                                                                       DESIGN
                                                                               ΨM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                                                    cytostatic;
                                                                                  Zlotnik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3668
                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                           DNA -
                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                            D
                                                                                                                                                                                                                                                                                                                                                                                                                            5057
   ining expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAAAAGTGGGTA 3179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCACTAATAACT 2879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATAATGGAAAAG 2819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATCTGCAAATGT 3059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCATGTAATTGAG 2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAAAAAGTGGGTA 3180
                                                                                                                                                                                                                                                                                                                                                                                     screening; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGATTGTTTTA 3360
|||||||||||
AATGATTGTTTTA 3359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTAATATGATTA 3300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTGTCTCAAAATA 3119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATCTGCAAATGT 3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTAATATGATTA 3299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTTAGTGATGAG 3239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |||||||||||||
TGTAAGAGAAAAC 2999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NTTAGTGATGAG 3240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTCTCAAAATA 3120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTAAGAGAAAAC 3000
```

```
of a
                                                                                                          Example 2;
                                                                                                                            a gene in a first soft tissue sample and a normal soft tissue sample d comparing the gene expression, also useful in treating soft tissue
                                                                                                         SEQ ID NO 5057; 210pp; English.
```

The invention relates to a novel method for detecting soft tissue sarcoma which comprises obtaining a first soft tissue sample from an individual and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples and comparing the presence of soft tissue sarcoma. The method of the invention has cytostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated DNA of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor.

Sequence 3668 BP; 1215 A; 730 C; 811 G; 872 T; 0 U; 40 Other;

Query M Best Lo Matches)y	99.2%; Score 3339.2; DB 12; Length 3668; Similarity 99.3%; Pred. No. 0; 1; Conservative 0; Mismatches 24; Indels 0; Gaps GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC 6
8 8	61 CCTGCTTCTCTAAGTGGGCAGCGGACAGCGGCACGCACATTTCACCTGTCCCGCAGACAA 120
8 8	121 CAGCACCATCTGCTTGGGAGAACCCCTCTCCCCTTCTCTGAGAAAGAA
ਲ ਝ	181 TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATG 240
ਝ <i>ਝ</i>	241 TACATCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTCTGCCTGC
ਲ <i>ਲ</i>	301 CAGATTCAGAGGACAGTCGCCACCTCCGGGAACATGCAGGCAG
ਲ ਝ	361 ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGG 420
ਝ ਝ	421 AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCCTCT 480
8 8	481 CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCACT 540
ਝ ਝ	541 CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAACTGTTG 600
8 8	601 ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA 660
8 8	661 AGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTGCATTTCTGAATGTT 720

á 8 Ś 밁 ঠ

밁

Ş 밁 S

В

рЬ S g 8 밁 Ś 밁 5 В 5 멍 δ g ठ

ঠ

B

망

S

```
2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1981
   2881
                                                                                                                                                                                                                                                                                                                         2641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2161
                                                                                                                                                                                                    ACAGTTAATGATTTCCGAGAGAAGATGATGTTATAAAGCTATACATTGTGTTCAAAATATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATCAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTGA
                                                                                                                                                                                                                                                                                                        GCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAAATGAAAAATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAAATGTTGAAAAGGCTGGCTGAAAACCCAGAATATGAAAATGAAAAAGCTGACCAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGAGTATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTAT
                                                                                                                                                                                                                                                                                                                                                                 ATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CIGCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAATTGAG
                                        AAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCATCACTAATAACT
                                                                                                                                             AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACAAAAACACGACAGAGTGCATATGCGCTTTCCCCAGTGGATTACTGAAAAATGAAAAATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTCAAATGAGTCCAATGT
                                                                                                                          <u>AAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGGAAAAG</u>
                                                                                                                                                                                                                                                                                    TGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACGTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCAGAACATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1920
                                                                                                                                                                                                    2760
                                                                                                                                                                                                                                                                                                                                                                  2640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1860
                                                                                                                          2820
                                                                                                                                                                2820
                                                                                                                                                                                                                                            2760
                                                                                                                                                                                                                                                                                    2700
                                                                                                                                                                                                                                                                                                                           2700
                                                                                                                                                                                                                                                                                                                                                                                                           2640
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1860
   2940
                                                                                 2880
RESULT 11
ABA04908
ID ABA04908;
XX
AC ABA04908;
AC ABA04908;
XX
DT 05-MAR-20;
XX
DE Human RNA
XX
DE Human; RH:
KW Human; RH:
KW immunosup;
KW antiarter:
KW antimetrinflam
KW antimetrinflam
KW antimetrinflam
KW antimetrinflam
XX
FT CDS
FT CD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뭥
```

```
3361
                                                        3301
                                                                                              3241
                                                                                                                                    3181
                                                                                                                                                                                            3061
                                                                                                                                                                                                                                                                         2941
                                                                                                                                                                                                                                                                                                                2881
CTCTG
                                                                           GATTAGCACTIGATTGAAGATTCTTTTAAAATACTATCAGTTAAAC/
                                                                                                                AAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAA?
                                                                                                                                                                                                                                                                        AGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATI
                                                                                                                                                                                            GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCC
                                                                                                                                                                                                                                                                                                                TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAA
                   CTCIG
                                      TGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATA
3365
                  3365
                                                                                                                                                      ACAAAAAGTGGGTA 3180
                                       WAATGATTGTTTTA 3360
                                                                                                                                                                  \CAAAAAGTGGGTA 3180
                                                                                                                                                                                                                                   CATCTGCAAATGT 3060
                                                AATGATTGTTTTA 3360
                                                                           TTTAATATGATTA 3300
                                                                                      TTTAATATGATTA 3300
                                                                                                                ATTTAGTGATGAG 3240
                                                                                                                                                                                                                                                                                                                 CCATGTAATTGAG
                                                                                                                            ATTTAGTGATGAG 3240
                                                                                                                                                                                            TTGTCTCAAAATA 3120
|||||||||||
TTGTCTCAAAATA 3120
                                                                                                                                                                                                                                                                          TGTAAGAGAAAAC 3000
                                                                                                                                                                                                                                                                                           TGTAAGAGAAAAC 3000
                                                                                                                                                                                                                                                                                                                 2940
```

standard; CDNA; 3372

05-MAR-2002 (first entry)

RNA helicase RH116 coding sequence

Human; RH116; RNA helicase; cytostatic; virucide; anti-HIV; immunosuppressive; immunostimulatory; antirheumatic; antiarthritic; antiarteriosclerotic; osteopathic; antidiabetic; hepatrotropic; antiinflammatory; cancer; infection; HIV; hepatitis; genetic disease; autoimmune disease; graft rejection; vaccine; ss.

sapiens

ঠ

В 8 ર્જ

멼

Ş

g

S

g S 밁 5 밁 5 8 5 멍 Ş 멍 ঠ

뫄

/*tag= a /product= Location/Qualifiers "Human

WO200185955-A1

15-NOV-2001.

11-MAY-2001; 2001WO-FR001441

11-MAY-2000; 2000FR-00006030

ISTAC. PASTEUR

Ś 멍 8 뮹

Ş 밁 **중 음 중**

В 5 밁

Cocude Ç Capron P

WPI; 2002-082898/11

```
S
                                                                                                                                                                                                                       뭕
                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                   ם
                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SXCCCCCCCXXXIIIX
          S
                                            5
                                                                  В
                                                                                 S
                                                                                                        밁
                                                                                                                      δ
                                                                                                                                            밁
                                                                                                                                                         ঠ
                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 99.2%;
Best Local Similarity 99.8%;
Matches 3343; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New polypeptide, inflammation, and homologous to RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence is the coding sequence for human RH116. RH116 is 116kDa protein and has homology to RNA helicases (DEXH box). RH116 and its coding sequence are useful for treating cancer; acute or chronic infections (especially by HIV or hepatitis B or C); inherited genetic diseases; (auto)immune diseases (particularly rheumatism, arthritis, arteriosclerosis, osteoporosis and diabetes, but many others listed) are prevent graft rejection. RH116 and its coding sequence are also use for inducing, or increasing, the immune response to a vaccine
                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                       541
                                                                                                                                                                                 421
                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                       181
           735
                                                                   601
                                                                                                                           555
                                                                                                                                              481
                                                                                                                                                               495
                                                                                                                                                                                                     435
                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                          195
                                                                                                                                                                                                                                                                                                                                                                                               135
                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Page
                                                                                                                                                                                            TCTGGCCGCCCGCTACATGAACCCCTGAGCTCACGGACTTGCCCTCTCCATCGTTTGAGAA
                                                                                                                                                                                                                                                                                                 GAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATGTACATCCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                  GAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGACCCTGCTTCTCTAAG
                             AGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCCTCCGGAGAACCGGCAGCCC
                                                                                                                                                                                                                                                             AGTCGCCACCTCCGGGAACATGCAGGCAGTTGAACTGCTGCTGAGCACCTTGGAGAAGGG
                                                                                                                                                                                                                                                                        AGTCGCCACCTCCGGGAACATGCAGGCAGTTGAACTGCTGCTGAGCACCTTGGAGAAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGACCCTGCTTCTCTAAG
AAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAAAGCAATGCAGAGAT
                                                                   TCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAACTGTTGACAATTGAAGACAG
                                                                                                                                              CGCTCATGATGAATATCT
                                                                                                                                                        CGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCCACTCTGGTGGACAAGCT
                                                                                                                                                                                                                                                                                                                                         GAATTT
                                                                                                                                                                                                                                                                                                                                                                                        TGGGAGAACCCTCTCCCTTCTCTGAGAAAGAAAGATGTCGAATGGGTATTCCACAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          de, useful for treating and diagnosing and drug screening, comprises a human RNA helicase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85-89; 114pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BP; 1157 A;
                                                                                                                   AGAGACGTCTTGGATAAGTGCATGGAGGAGGAACTGTTGACAATTGAAGACAG
                                                                                                                                                                                   CCGCTACATGAACCCTGAGCTCACGGACTTGCCCTCTCCATCGTTTGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 3338.8;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; 748
                                                                                                                                                                                                                                                                                                                                                                              CTGAGAAAGAAGATGTCGAATGGGTATTCCACAGACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ი</u>
                                                                                                                                               CCTCCTTCAGCCCACTCTGGTGGACAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  u;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cancer or polynucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              d) and
useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   is a and ic
                                                                                                                                                                 554
                                                                                                                                                                                                      494
                                                                                                                                                                                                                                           434
                                                                                                                                                                                                                                                                                 374
                                                                                                                                                                                                                                                                                                                     314
                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                      134
                                               734
                                                                    660
                                                                                      674
                                                                                                          600
                                                                                                                           614
                                                                                                                                              540
                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                            254
                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                         음 성 음
               र्
                                      밁
                                                     5
                                                                                                                              δ
                                                                                                                                                      밁
                                                                                                                                                                    δ
                                                                                                                                                                                       밁
                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                           ద
                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                ద
                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                 ф
                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
  1801
                                                                                                                   1621
                                                                                                                                      1635
                                                                                                                                                                           1575
                                                                                                                                                                                            1501
                                                                                                                                                                                                                                                                        1381
                                                                                                                                                                                                                                                                                                             1321
                                                                                                                                                                                                                                                                                                                                                                                        1201
                                                                                                                                                                                                                                                                                                                                                                                                                             1141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                       TAGACTCAAGAAAGAAAACAAACCAGTGATTCCCCTTCCTCAGATAC
                                                                                                                                                                                                                                                                                                                                                                                                                             CCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACTTV
                                                                            TTCACCTGGTGTTGGAGGGGCCACGAAGCAAGCCAAAGCTGAAGAA
                                                                                                                                                                                                       CAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAG
                                                                                                                                                                                                                                                                        TATTATCAGTACAGCTCAAATCCTTGAAAACTCCCCTCTTAAACTTGG
                                                                                                                                                                                                                                                                                                                                                 TGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAAATGG:
                                                                                                                                                                                                                                                                                                                                                                                        GAAGAAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCTTACCAAATGGAAGTTGCCCAGCCAGCCTTGGAAGGGAAGAATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTAGATGAAAGTCTTGGACATAACAGCAACATGGGCAGTGATTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCAGCCAAATCTGGAGAAGGAGGTCTGGGGCATGGAGAATAACTCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAA
                                      CAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGATGCAG
                                                                                                                                                                                                                                              TGCTGGTGTTCAATTGTCAGACTTTTCCCTCATTATCATTGATGAA:
                                                                                                                                                                                                                                                                                                                       ATTAAGTGGTGATACCCAACTGAAAATATCATTTCCAGAAGTTGTC!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCTTACCAAATGGAAGTTGCCCCAGCCAGCCTTGGAAGGGAAGAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTAGATGAAAGTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAGAA(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGATTCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGACATAACAGCAACATGGGCAGTGATTCAC
                                                                                                                                                                                                                                                                        GAAAATGGAGAAGA 1454
||||||||||||||
GAAAATGGAGAAGA 1440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTTCAACCACAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCAATGCAGAGAT
            NGTCAAATGAGTCC 1874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCACCATGGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGTGTCAGCTG
                                         CCAGAGAAGATCC 1814
                                                                              TTGATCAACTGAA 1754
||||||||||
TTGATCAACTGAA 1740
                                                                                                                                                                                                                                                                                                                                                 CATCGTGTTATTGG 1334
                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCACTTAGACAA 1214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCATCATCTGCCT 1154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCACCATGGGAAG
                                                                                                                             ACATTTTAAAACT 1694
                                                                                                                                                                                                                                    GTCATCACACCAA
                                                                                                                                                                                                                                                                                                            AGTCCTGTGATAT 1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACTCCAGCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGTGTCAGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGAATCATCTTT
                                                                                                                                                         TGGGACTAACAGC 1634
                                                                                                                                                                                               AGTTGAAAAACAA 1560
                                                                                                                                                                                                        AGTTGAAAAACAA 1574
                                                                                                                                                                                                                                                                                                                         AGTCCTGTGATAT 1394
                                                                                                                                                                                                                                                                                                                                                                                         AGGTACTGCTAGT
                                                                                                                                                                                                                                                                                                                                                                                                           AGGTACTGCTAGT 1274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACTCCAGCTCAG 1094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGAATCATCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTCAACCACAGT
                                                                                                                     ACATTTTAAAACT 1680
                                                                                                                                                                                                                                              TCATCACACCAA 1514
                                                                                                                                                                                                                                    1500
                                                                                                                                                                                                                                                                                                                                                                                         1260
                                                                                                                                                                                                                                                                                                                                                                                                                              1200
     1860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
```

```
1981
                                                                                                                                                                                                                                                                                                                                                               1995
                                                                                                                2581
                                                                                                                                                               2461
                                                                                                                                                                          2475
                                                                                                                                                                                      2401
                                                                                                                                                                                                2415
                                                                                                                                                                                                            2341
                                                                                                                                                                                                                       2355
                                                                                                                                                                                                                                   2281
                                                                                                                                                                                                                                                         2221
                                                                                                                                                                                                                                                                    2235
                                                                                                                                                                                                                                                                               2161
                                                                                                                                                                                                                                                                                                      2101
                                                                                                                                                                                                                                                                                                                             2041
                                                                                                                                                                                                                                                                                                                                         2055
                                                                                                                                                                                                                                                                                                                                                                           1921
                                                                                                                                                                                                                                                                                                                                                                                      1935
                                                                                                                                                                                                                                                                                                                                                                                                             1875
                                             2761
                                                                                                                                                                                                                                              2295
                                                                              2715
                                                                                          2641
                                                                                                                            2595
                                                                                                                                                                                                                                                                              CCGAGAGAAGATGATGATAAAGCTATACATTGTGTTCAAAATATGAAAACCAGAGGAGTA
                                                                                         CGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCCAGAGCTGATGAGAGCAC
                                                                                                                                       GGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTTACAAAAAACACGACA
                                                                                                                                                                                                                                                               GCTGGCTGAAAACCCCAGAATATGAAAATGAAAAGCTGACCAAATTAAGAAATACCATAAT
                                                                                                                                                                                                                                                         GCTGGCTGAAAACCCAGAATATGAAAATGAAAAGCTGACCAAATTAAGAAATACCATAAT
                                                                                                                                                                                                                                                                                                      TGATGATGAGTATTGTGATGGTGATGAAGATGAGGATTTAAAGAAACCTTTGAAACT
                                                                                                                                                                                                                                                                                                             ACTAGGACTGAGGAATCAGCACGAGGAATAATCTTTACAAAAACACGACA
                                                                                                                                                                                                 2474
                                                                                                                                                                                                                        2414
                                                                                                                                                                                                                                                                     2294
                                                                                                                                                                                                                                                                                                       2160
                                                                                                                                                                                                                                                                                                                  2174
                                                                                                                                                                                                                                                                                                                              2100
                                                                                                                                                                                                                                                                                                                                                               2054
                                                                                                                                                                                                                                                                                                                                                                           1980
           2954
                       2880
                                  2894
                                             2820
                                                        2834
                                                                    2760
                                                                               2774
                                                                                          2700
                                                                                                     2714
                                                                                                                 2640
                                                                                                                            2654
                                                                                                                                        2580
                                                                                                                                                   2594
                                                                                                                                                               2520
                                                                                                                                                                          2534
                                                                                                                                                                                      2460
                                                                                                                                                                                                            2400
                                                                                                                                                                                                                                   2340
                                                                                                                                                                                                                                              2354
                                                                                                                                                                                                                                                         2280
                                                                                                                                                                                                                                                                                2220
                                                                                                                                                                                                                                                                                           2234
                                                                                                                                                                                                                                                                                                                                         2114
                                                                                                                                                                                                                                                                                                                                                     2040
 2940
```

8 B

\$ D.

8 g 장 유

Ş

В S 뫄 5

멍

```
정 음 정 음
                                                                                            5
                                                                                                                     멍
                                                                                                                                    5
                                                                                                                                                         뮹
                                                                                                                                                                             á
                                                                                                                                                                                                   유
                                                                                                                                                                                                                                        В
뭥
                                                                                                                                                                                                                                                          ्र
                                                                             3181
3301
                                                          3255
                                                                                                                                                                                 3075
                                                                                                                                                                                                                         3015
                                      TGAAGATTCTTTTAAAATACTATCAGTTAAACATTTAATATGATTA:
                                                                                                                     GGTTTTCAAAAATAATTCAACAAAGAAACAATACAAAAAGTGGGTAG
                                                                                                                                                                                                                                           CAATATGACCCCAGAATTCAAGGAACTTTACATTGTAAGAGAAAAC.
                                                                              ATTTCCCAATCTTGACTATTCAGAATGCTGTTTATTTAGTGATGAGG
                                                                                                                                                                                                   GAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGT
                                                                                                                                                                                                              GAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGT(
                                                                                                                                                             AACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAATAAGGAATTTTGTAGT
ATTATGCTACAGAACTGACATAAGAATCAATAAAATGATTGTTTTA
           ATTATGCTACAGAACTGACATAAGAATCAATĀAAATGATTGTTTTA(
                                                                                                                                                                         AACAATGATGGTGCACAAAGGCTTAGATTTGCCTTTGTCTCAAAATA
                                                                             GATTAGCACTTGAT 3254
                                                                                                                     GAATTACCTATCAC 3194
                                                                                                                                                                                                     GCCAGGCTTGGGG 3060
                                                                                                                                                                                                                                            AAAGCACTGCAAAA 3014
||||||||||||
AAAGCACTGCAAAA 3000
CTCT 3350
                                        FGATTAATGTATTC
                                                 RGATTAATGTATTC 3314
                                                                                                                                                                         NGGAATTTTGTAGT 3134
                                                                                                                                                                                                                  GCCAGGCTTGGGG 3074
                   TCT 3364
                                                                                                                       3180
                                                                                                                                                              3120
                                        3300
```

RESULT 12
ADC30823
ID ADC30
XX
AC ADC30
XX
AC ADC30
XX
IB-DE
XX
Human
XX
Human
XX
Homo
KW Human
XW
Human
XW
Holec
KW neurc
KW neurc
KW molec
KW Homo
YX
Homo
Y ADC30823 ADC30823; novel standard; (first sequence, CDNA; entry) 3446 **SEQ** ВP ID NO:905

Human; diagnostic; drug screening; forensics; gene mappi biodiversity assessment; Parkinson's disease; Alzheimer' neurodegenerative diseases; anaemia; platelet disorder; ulcers; osteoporosis; autoimmune disease; cancer; molecular weight marker; food supplement; antiparkinsoni neuroprotective; antianaemic; anticoagulant; thrombolyti antiulcer; osteopathic; immunosuppressive; antiinflammat gene therapy; gene; ss. ian; nootropic;
ic; vulnerary;
tory; cytostatic; ; gur Ø wound; burns; disease;

sapiens

WO2003029271-A2

10-APR-2003

24-SEP-2002; 2002WO-US030474.

24-SEP-2001; 2001US-0324631P

(HYSE-) HYSEQ INC

Tang TY, Zhang J, Zhou P, Ghosh M, Haley-Vicente D, 1 Wang D,
Drmanac R RT; Xue Ą, , Zhao Asundi ۷Ÿ, Wang : z, J, Weng G; Wehrman T;

WPI; 2003-371981/35. P-PSDB; ADC31794.

유 상 유

ક

5

뮍 ঠ В Ś

유왕

В 5 유왕

В र् 음 경

New polynucleotide and polypeptide useful for d treating conditions such as neurodegenerative d disorders, wounds, burns, ulcers, osteoporosis, diagnosing une diseases or g, preventing or anemias, platelet

Claim **SEQ** Ħ ö 905; 1185pp; English

CC (ADCIDITAL NOTICE COLLEGATION OF THE COMM REQUESTED TO THE COMMENTATION OF THE CONTROL AND COLLEGATION OF THE CONTROL AND COLLEGATION OF THE CO	The invention relates to 971 novel human cDNA sequences of invention also relates to nucleic acid sequences of the novel human cDNAs. The invention additionally vectors and host cells comprising a nucleic acid or recombinant production of a polypeptide of the invention; a method of against a polypeptide of the invention; a method of polynucleotides or polypeptides of the invention; identifying a compound which binds to a polypeptid invention further discloses methods of peventing, ameliorating a medical condition; kits comprising and/or monoclonal antibodies for carrying out the invention; methods for the identification of compound conting and/or conting accurate corresponding to the cDNA sequence.

```
1964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1844
        2676
                                                                                                                                                                                                                                                            2384
                                                                                                                                                                                                                                                                                                                                 2256
                                                                                                                                                                                                                                                                                                                                                      2264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1664
                                                                                                                        AATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAAATAATGACAAGGATTTTGGAACTCAAATGAGTCCAATGTCAGATTTTGGAACTCAAACTCAAATGAGTCCAATGTCAGATTTTGGAACTCAA
                                                                                      GGATATTAAAGAATGTAACATTGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCAT
                                                                                                                                                                                                                           GTGGATTACTGAAAATGAAAAATTTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGG
                                                                                                                                                                                                                                                            GGAATCAGCACGAGGAATAATCTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCA
                                                                                                                                                                                                                                                                                                                                                      CAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACTATTAAAACTGTTAAAGAAAACCTTGATCAACTGAAAAAACCAAATACAGGAGCCATG
                              AGCTGGACACAGCAGTGAGTTCAAACCCATGACACAGAATGAACAAAAAAGTCATTAG
                                                                                                                                                                                AGCTGGACACAGCAGTGAGTTCAAACCCATGACACAGAATGAACAAAAAAGAAGTCATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACGAAGCAAGCCAAAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATGCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACGAAGCAAGCCAAAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATGCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCAGTGATTCCCCTTCCTCAGATACTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGC
TGGTTCAGGAGTTATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAA
                                                                                                                                                                                                                                                                                                                                                                                                   AAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1843
                                                                                                                                              2555
                                                                                                                                                                                                                                       2435
                                                                                                                                                                                                                                                            2443
                                                                                                                                                                                                                                                                                  2375
                                                                                                                                                                                                                                                                                                          2383
                                                                                                                                                                                                                                                                                                                                 2315
                                                                                                                                                                                                                                                                                                                                                      2323
                                                                                                                                                                                                                                                                                                                                                                            2255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1723
         2735
                               2743
                                                     2675
                                                                           2683
                                                                                                2615
                                                                                                                        2623
                                                                                                                                                                     2563
                                                                                                                                                                                          2495
                                                                                                                                                                                                                 2503
                                                                                                                                                                                                                                                                                                                                                                                                     2263
                                                                                                                                                                                                                                                                                                                                                                                                                         2195
                                                                                                                                                                                                                                                                                                                                                                                                                                                2203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2083
```

멍 δ g δ 유정

Вp Ś đ ર્ક र्

밁

Ś

g

5

В

밁 Ş g

```
S
                              ď
                                                5
                                                                유 성
                                                                                                       밁
                                                                                                                     5
                                                                                                                                      밁
                                                                                                                                                          S
                                                                                                                                                                               밁
                                                                                                                                                                                             5
                                                                                                                                                                                                            . B
                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                Ş
밁
                                                                       3284
                                                                                        3216
                                                                                                                                                                                                                   3044
                                                                                                                                                                                                                                     2976
                                                                                                                                                                                                                                                                        2916
                                                                                                                                                                                                                                                                                           2924
                                                                                                                                                                                                                                                                                                                                                                                    2736
                                  ATCAGTTAAACATTTAATATGATTATGATTAATGTATTCATTATGCT
                                                                     AAAGAAACAATACAAAAAGTGGGTAGAATTACCTATCACATTTCCC/
                                                                                                                                                                               AAATGGTGAAATCATCTGCAAATGTGGCCAGGCTTGGGGAACAATGA
                                                                                                                                                                                                                                                                                          CAAGAATAACCCATCACTAATAACTTTCCTTTGCAAAAAACTGCAGTG
                                                                                                                                                       CTTAGATTTGCCTTGTCTCAAAATAAGGAATTTTGTAGTGGTTTTC1
                                                                                                                                                                                                                             GGAACTTTACATTGTAAGAGAAAACAAAAGCACTGCAAAAGAAGTGTG
                                                                                                                                                                                                                                                               TGGGGAAGATATCCATGTAATTGAGAAAATGCATCACGTCAATATGA
                                                                                                                                                                                                                                                                                                                                       ACAGATGCAAAGTATAATGGAAAAGAAAATGAAAAACCAAGAGAGAAATA
                                                                                                                                                                                                                                                                                                                                                                           AGCTATACATTGTGTTCAAAATATGAAACCAGAGGAGTATGCTCAT
           AAGAATCAATAAAATGATTGTTTTACTCT
                                                                                                                                                                                                                    GGAACTTTACATTGTAAGAGAAAACAAAGCACTGCAAAAGAAGTGTC
                                                                                                                                                                                                                                                        TGGGGAAGATATCCATGTAATTGAGAAAATGCATCACGTCAATATGJ
                                                                                                                                                                                                                                                                                                                                                                  AGCTATACATTGTGTTCAAAATATGAAACCAGAGGAGTATGCTCATI
 3432
                 3364
                                                                                                                                                                                                                                                      ACCCCAGAATTCAA 2975
                                                                                                                                                                                                                                                                                                                              \TTGCCAAGCATTA 2855
||||||||||
\TTGCCAAGCATTA 2923
                                                                                                                                                                                                                                                                                                                                                                            \AGATTTTGGAATT
|||||||||
                                                                                                                                                                                                                                                                                                     AGATTTTGGAATT
                                                ACAGAACTGACAT 3335
                                                                                                          ATCTTGACTATTC
                                                                                                                                                              AAAATAATTCAAC
                                                                                                                                                                                 TGGTGCACAAAGG
                                     ACAGAACTGACAT
                                                                       CTTTAAAATACT
                                                                                         CTTTTAAAATACT
                                                                                                                            ATCTTGACTATTC
                                                                                                                                              AAAATAATTCAAC
                                                                                                                                                                                                   TGGTGCACAAAGG 3095
                                                                                                                                                                                                                     CCGACTATCAAAT
                                                                                                                                                                                                                              CCGACTATCAAAT 3035
                                                                                                                                                                                                                                                                                            TGCTAGCCTGTTC
                                     3403
                                                                                         3275
                                                                                                          3283
                                                                                                                             3215
                                                                                                                                              3223
                                                                                                                                                               3155
                                                                                                                                                                                                                                                                                                                                                                                     2795
                                                                       3343
                                                                                                                                                                                 3163
                                                                                                                                                                                                                    3103
                                                                                                                                                                                                                                                                                            2983
                                                                                                                                                                                                                                                                                                                                                                   2863
```

AAD11170 standard; DNA; 3131 ₿P

AAD11170

(first entry)

melanoma differentiation associated-5 protein-related DNA.

RESULT 13
AAD11170
ID AAD11
XX
AC AAD11
XX
DT 29-NC
XX
Human
XX
Human
XX
Human
XX
Homo
XX
Homo
XX
Homo
XX
OS Homo
XX
XX
XX
XX
XX
ACTE OF SE
XX
PR 29-FE
XX
PR 29-FE
XX
PA (UYCC Human melanoma differentiation associated gene; Mda-5; RNA helicase motif; caspase recruitment domain; CARD; t neuroblastoma; astrocytoma; glioblastoma; multiforme; obreast; colon; prostate; osteosarcoma; chrondosarcoma; central nervous system; cytostatic; apoptosis; ds. <u>α</u> # interferon; IFN;
therapy; melanoma;
cancer; cervical;
systemic toxicity;

sapiens

WO200164707-A1

유·정

S

ద 5 밁 र् 용. 성

음 성

밁 5 밁 S В ঠ

07-SEP-2001

2001WO-US006960

29-FEB-2000; VIND COLUMBIA 2000US-00515363 NEW YORK

OX CO

```
The present invention relates to an isolated nucleic acid encoding a contains a caspase recruitment domain (CARD) and a RNA helicase motif. CC Mda-5 is a novel interferon (IFN) inducible gene with structural containing terminal differentiation in human melanoma cells induced during terminal differentiation in human melanoma cells treated with the combination of recombinant fibroblast IFN and the cancer end (MEZ). Mda-5 is useful for identifying compounds that may induce its expression. Mda-5 is useful for treating cancer e.g., melanoma, neuroblastoma, astrocytoma, glioblastoma concer, osteosarcoma, chrondosarcoma and especially where the cancer is a cancer, osteosarcoma, chrondosarcoma and especially where the cancer is a cancer of the central nervous system and apoptosis. The Mda-5 promoter exhibits melanocyte tissue specificity and minimises systemic toxicity. The present sequence is designated SEQ ID NO:2 in the sequence listing, but does not correspond to the sequence designated SEQ ID NO:2 in the main correspond to the sequence designated SEQ ID NO:2 in the main correspond to in the sequence designated SEQ ID NO:2 in the main correspond to in the sequence designated SEQ ID NO:2 in the main correspond to in the sequence listing, but compared to in the sequence listing, but compared to in the sequence listing, but constituted to the sequence listing, but compared to in the sequence listing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 92.2%;
Best Local Similarity 99.8%;
Matches 3129; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                       421
                                                                                  589
                                                                                                               361
                                                                                                                                           529
                                                                                                                                                                       301
                                                                                                                                                                                                   469
                                                                                                                                                                                                                                                          409
                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                          289
                                                                                                                                                                                                                                                                                                                                                                                                                                  229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            169
                                                                                                                                                                                                                                                                                                                                                                                                       61
GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAAT
                                                                                                             3131 BP; 1075 A; 583
                                                                                                                                                                                     GACTTGCCCTCTCCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTC
                                                                                                                                                                                                                                GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCCTGAGCTCACG
                                                                                                                                                                                                                                                                                       GACTTGCCCTCTCCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTC
                                                                                                                                                                                                                                              GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCCTGAGCTCACG
                                                                                                                                                                                                                                                                                                                                                for cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 134-148; 152pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gopalkrishnan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encoding a Melanoma Differentiation Associated cell growth suppression, apoptosis and anti-viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 3104; D
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G; 774 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            u;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 3131;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                             468
                                                                                                                                                                                                                                                                                                                                                 180
                                                                                   648
                                                                                                                                                                                                                                                                                                                   408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
                                                                                            S
                                                                                                                           밁
                                                                                                                                                  δ
                                                                                                                                                                               뮍
                                                                                                                                                                                                               S
                                                                                                                                                                                                                                             日
                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                     S
                                                                                                                                                                                                                                                                                                                                                               1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                              TTGAAGAAATGGTATCGTGTTATTGGATTAAGTGGTGATACCCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCAGTGATTCAGGCACCATGGGAAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAGCA 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTTTGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACAAGTTTTGGACAAGTTTTGGACAGCTTTTGGAAAGTCTTTGGACAAGTTTTGGACAGATTGGAAAGTCTTTGGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAGAGCAACTTCTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGA
                                GTTAAAGAAAACCTTGATCAACTGAAAAACCAAATACAGGAGCCATG
                                                                                    AAAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATGCATT
                                                                                                                                                                                                                                                              ATCATTGATGAATGTCATCACACCAACAAAGAAGCAGTGTATAATAA
                                                                                                                                                                                                                                                                                                      CCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAGAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATTGCTCAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JAGTTAACAGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAACAGCAACATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCCAGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                        GAAAATATCATTT 1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTCCAACCATTT 1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGAGTGGCTGTT 1188
                                                                                              TACTATTAAAACT 1728
                                                                                                                                             CACGAAGCAAGCC 1668
                                                                                                                                                                                      ACCAGTGATTCCC 1608
                                                                                                                                                                                                                                                                                                         CTTTTCCCTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAAATATCATTT 1368
|||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGAGTGGCTGTT 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGAATCAGACACA 780
                                            CAAGAAGTTTGCC 1788
                                                                                                                                 CACGAAGCAAGCC
                                                                                                                                                                                                                                                 CATCATGAGGCAT 1377
                                                                                                                                                                                                                                                               CATCATGAGGCAT 1548
                                                                                                                                                                                                                                                                                                                         CTTTTCCCTCATT 1488
                                                                                                                                                                                                                                                                                                                                                                 CCTTGAAAACTCC 1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGAAAAGTTATA 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCAGCCAGCCTTG 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCAGCAAGAGCA 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAACAGCAACATG 1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTCTGGGGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGTCCTCAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NGAATCAGACACA 948
                                                                        PACTATTAAAACT 1557
                                                                                                                                                                                                                                                                                                                                                                                   CTTGAAAACTCC 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      840
                    1617
                                                                                                                                 1497
                                                                                                                                                                                                                                                                                                        1317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
```

र्

밁

망 δ

S 밁 S

481

र्

8

B Ş g 5 밁 Ş ঠ

```
2518
                                                                                               2458
                                                                                                                                                                                                                2218
                                                                                                                                                                                                                            2387
                                                                                                                                                                                                                                          2158
                                                                                                                                                                                                                                                                     2098
                                                                                                                                                                                                                                                                                                 2038
                                                                                                                                                                                                                                                                                                                             1978
                                                                                                                                                                                                                                                                                                                                                          1918
                                                                                                                                                                                                                                                                                                                                                                                     1858
                                                                                                                                                                                                                                                                                                                                                                                                                 1798
                                                                                                                                                                                                                                                                                                                                                                                                                               1969
                                                                                                                                                                                                                                                                                                                                                                                                                                            1738
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1849
                                                                                  2687
                                                                                                              2627
                                                                                                                           2398
                                                                                                                                          2567
                                                                                                                                                       2338
                                                                                                                                                                                    2278
                                                                                                                                                                                                 2447
                                                                                                                                                                                                                                                        2327
                                                                                                                                                                                                                                                                                    2267
                                                                                                                                                                                                                                                                                                                2207
                                                                                                                                                                                                                                                                                                                                           2147
                                                                                                                                                                                                                                                                                                                                                                                                   2029
                                                      2747
                                                                                                                                                                     2507
                                                                                                                                                                                                                                                                                                                                                                       2087
CATCACTAATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATA
             GTATAATGGAAAAATGAAAAACCAAGAGAATATTGCCAAGCATTACAAGAATAACC
                                        GTGGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAG
                                                                                                       GTGGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAG
                                                                                                                           GAGGAATAATCTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACTG
                                                                                                                                                                                                                                                                                                 GAT - - GCGTATACTCATCTTGAAACTTTCTATAATGAAGAGAAAAGATAAGAAGTTTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                 TGGGCCATTCAAATGGAAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGG
                                                                                                                                                                                                                                                                             AGCTGACCAAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCAC
                                                                                                                                                                                                                                                                                                                                                         AGCTGACCAAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1977
                                                                                                                                                                                                                                                                                                                                                                                                                 1857
                                                                                  2746
                                                                                                                                                                                    2337
                                                                                                                                                                                                               2277
                                                                                                                                                                                                                            2446
                                                                                                                                                                                                                                                        2386
                                                                                                                                                                                                                                                                                                                             2037
                                                                                                                                                                                                                                                                                                                                           2206
                                                                                                                                                                                                                                                                                                                                                                                      1917
                                                                                                                                                                                                                                                                                                                                                                                                  2086
                                                                                                                                                                                                                                                                                                                                                                                                                                            1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1908
                          2866
                                         2637
                                                      2806
                                                                    2577
                                                                                                2517
                                                                                                             2686
                                                                                                                           2457
                                                                                                                                          2626
                                                                                                                                                        2397
                                                                                                                                                                     2566
                                                                                                                                                                                                 2506
                                                                                                                                                                                                                                          2217
                                                                                                                                                                                                                                                                     2157
                                                                                                                                                                                                                                                                                   2326
                                                                                                                                                                                                                                                                                                  2097
                                                                                                                                                                                                                                                                                                                2266
                                                                                                                                                                                                                                                                                                                                                                       2146
                                                                                                                                                                                                                                                                                                                                                                                                                               2028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1848
```

문 ঠ g ঠ

S

S 밁

The present invention describes a or chronic obstructive pulmonary of determining the expression level of

a method of testing disease. The method of a marker gene in

n cor

bronchial asthma mprises biological sample

Claim

Ħ NO

1065;

241pp;

English

음 성

밁 5 유

밁 Ś В ঠ 밁 S B 5 망 8 DЬ ঠ 멍 र्

5 유

밁 5 밁 ঠ 밁 Ş ġ

S

```
RESULT 14
ADJ75813
ID ADJ75
XX
AC ADJ75
XX
DT 20-MJ
XX
DT 20-MJ
XX
DE Mark
XX
KW bron
KW resp
KW gene
XX
PN EP1:
PY 04-
XX
PF 04-
XX
PF 06-
PR 20-
XX
PI Oh
XX
PI CC
PT Te
PT Te
PT Te
XX
XX
PT CC
XX
XX
CC T
CC C
                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                   ద
                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                  Testing for bronchial asthma or chronic obstructive promparing the expression level of a marker gene in a from a subject with the expression level of the gene healthy subject.
                                                                                                                                                                                                                                        bronchial asthma; chronic obstructive pulmonary disease respiratory epithelial cell; interleukin-13; respiratory gene therapy; marker gene; gene; ds.
                                                                                                                                              06-AUG-2002;
20-MAR-2003;
                                                                                                                                                                                                                                                                                                            ADJ75813
                                                                                                                                                                        04-AUG-2003;
                                                                                                                                                                                         03-MAR-2004
                                                                                                                                                                                                         EP1394274-A2
                                                                                                                                                                                                                                                                                                                            ADJ75813
                                                                                                                              (GENO-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2698
                                                                                                                                                                                                                                                                                                                                                                                                                        3227
                                                                                                                                                                                                                                                                                                                                                                                                                                         2998
                                                                                                                                                                                                                                                                                                                                                                                                                                                         3167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2927
                                                                                                                                                                                                                                                                          gene
                                                                                                            z
                                                                                                                             GENOX RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTC:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCATCTGCAAATGTGGCCAĞGCTTGGGGAACAATGATGGTGCACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTV
                                                                                                                                                                                                                                                                                                                                                                                                                                        ACAAAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                        TTGTAAGAGAAAACAAAGCACTGCAAAAGAAGTGTGCCGACTATCAA
                                                                                                                                                                                                                                                                                                                                                                                  ATTTAATATGATTA
                                                                                                            Sugita Y,
                                                                                                                                                                                                                                                                          SEQ ID
                                                                                                                                               2002JP-00229312.
2003JP-00077212.
                                                                                                                                                                        2003EP-00254857
                                                                                                                                                                                                                                                                                            (first
                                                                                                                              INC
                                                                                                                                                                                                                                                                                                                            DNA;
                                                                                                                                                                                                                                                                            NO:1065
                                                                                                             Yamaya
                                                                                                             Σ
                                                                                                                                                                                                                                                                                                                             ₽P
                                                                                                              Kubo
                                                                                                             Ħ,
                                                                                                            Nagai
                                                                                                                                                                                                                                                                                                                                                                                                                  TTTAAAATA
                                                                                                             Ħ,
                                                            pul
a bi
e in
                                                                                                              Izuhara K;
                                                          monary disease by ological sample a sample from a
                                                                                                                                                                                                                                                                                                                                                                                                                                         rrcagaargcrgrr 3057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACAAAGAAACAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |||||||||||||
AATAAATGGTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /; antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                         ACTATCAGTTAAAC 3117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \ATAAATGGTGAAA 3046
||||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                  \CTATCAGTTAAAC 3286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VACAAAGAAACAAT 3166
                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGAATGCTGTT 3226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGCTTAGATTTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTTAGATTTGC 3106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGGAACTTTACA 2817
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGGAACTTTACA 2986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2757
```

```
cc expression level of the marker gene in a biological sample from a healthy cc subject, and judging whether the subject has bronchial asthma or chronic obstructive pulmonary disease. The marker gene comprises: (a) a group of cc genes (S1) whose expression levels increase when respiratory epithelial cc cells are stimulated with interleukin-13; or (b) a group of genes (S2) whose expression levels decrease when respiratory epithelial cclls are cclls are stimulated with interleukin-13; or (b) a group of genes (S2) cc whose expression levels decrease when respiratory epithelial cells are cclls are stimulated with interleukin-13, Also described: (1) a reagent (1) for testing for bronchial asthma or chronic obstructive pulmonary disease; (2) a kit for screening for a candidate compound for a therapeutic agent cc treat bronchial asthma or chronic obstructive pulmonary disease; (3) cc an animal model for bronchial asthma or chronic obstructive pulmonary disease; (3) a cc method for producing an animal model for bronchial asthma in a mouse; (5) a method for producing an animal model for bronchial asthma or chronic obstructive pulmonary disease, comprising the compound, a marker gene or an antisense nucleic acid corresponding to a portion of cc the marker gene, a ribozyme, a polynucleotide that suppresses the cronic an encoded by a marker gene; and (7) a DNA chip for testing for bronchial asthma or chronic obstructive pulmonary disease, on which a cc parotein encoded by a marker gene; and (7) a DNA chip for testing for an antibody recognising and can be used in gene therapy. The method cc useful for testing for or screening for a therapeutic agent for comprohial asthma or chronic obstructive pulmonary disease. The present cc sequence is used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 2609; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                       486
                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                               426
                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAAT
                                                                                                        GACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGT
                                                                                                                                                                                                                                                                                                                              GAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3771 BP;
                                   AAGAGAGCTACTAAAAAAGGATTGTGCAGAAAAGAAAACTGGTTCTCTGCATTTCTGAATGT
                                                                                                                                                                                                                                                                                                       CACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGTTCTGCAGAGACAGCTTCAGGAATCTCATCTTATTCTTCAGGCCCAGGCTGAAAAT
                                                                                                                                                                                  TCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAACTGTT
                                                                                                                                                                                                                                                    TCCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGATT CTT AAAAAGAT CAA CACCTG TGGT AACA CCAGCG CGGCAGAACTG CTGCTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         65.5%;
nilarity 80.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1183 A;
                                                                                                                                                                                                                                 GAGACTGCCCATGACGAGTGTCTCCACTTGCTGACCCTCCTCCAGCCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 2202.4; Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; 866 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            616;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                    539
                                                                                                                                                                                                                                                                                                         545
                                                                                                                                                                                                                                                                                                                                          479
                                                                                                                                                                                                                                                                                                                                                                                485
                                                                                                                                                                                                                                                                                                                                                                                                                  419
                                                  719
                                                                                                                         659
                                                                                                                                                            665
                                                                                                                                                                                                                                 605
                                                                                   725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                밁
                                                                  5
                                                                                                     밁
                                                                                                                                        á
                                                                                                                                                                              밁
                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                              GAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGA 779
                                                                                                                                                                                                                                                    TGAATGTCATCACAACCAACAAAGAAGCAGTGTATAATAACATCATG
                                                                                                                                                                                                                                                                                                                                                                                                                    CTTGGAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAATATTATTATCTGCCTCCCCACGGGAGTGGGAAAAACCAGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGCACCATGGGAAGTGATTCAGATGAA---GAGAATGTGGCCAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTGCCTGCTGTCGATGAGTCAAGTCTGGAGACAGAGGCCTGGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCCAACT 839
                                                                                                        AAAACATATTTTAAATATATGTGCCAATCTTGATGCCTTTACCATTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAATAAGGTAATGTTAGCAGAACAACTTTTCCGAAAAGAGTTCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGGCACCATGGGAAGTGATTCAGATGAAAGTGTCATCCAGACAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGAAGTGTCAGCTGCTTAGATGAAAGTCTTTGGACATAACAGCAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGACAACACAGACTTGGCTAACTCGTCTCACAGAGATGGGCCTGCAC
TGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATG
                                                                                                                              AGAACACTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAAAGATCACTTAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAAGAAGAAGCAGGCATCTGAATCCGGGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCTAATGAGTGTCT
 ACAAGGATTCAAAC 1856
                                                                                                           NAAACAGTGAAAGA 1805
                                                                                                                                                                                                                                                                                                                              GACGATATTTGAA 1625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAGACGACATATT 965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGAGAATAACTC 899
                                                                                                                           AAACTGTTAAAGA 1736
                                                                                                                                                                                                                                                      ITTCCCCTTCCTCA 1616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAAGTTTGGCAGA 1025
                                    TTGTGATTGCTGA 1865
                                                                                                                                                                                                                                                                                                                                                      GGCATTATTTGAT 1556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTCCCTCTTAAA 1436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATTTCCAGAAGT 1376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATTTTGAAGAA 1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGTATCCCCCGA 1145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGGGCAGTGATTC 1019
                                                      TTGCCATTGCAGA 1796
                                                                                                                                                                               AGTCTGAGGCTGA 1745
                                                                                                                                                                                                          AAGCCAAAGCTGA 1676
                                                                                                                                                                                                                                                                                                                                                                                                TCATTATCATTGA 1496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATTTCCÁGÁAGT 1445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATATTTGAAGAA 1385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTATCGTTCTTGT 1325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTATAGTTCTTGT 1256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTTTACATCAC 1265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGTTTACATTGC 1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCTAGATGGGAA 1205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTTGGAAGGGAA 1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAGCATCCCCGGA 1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      reecaecarre 1085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCCTCTTAAA 1505
```

ঠ

S

g ठ 밁 S 밁 δ 밁 \$ 뭐 S 밁 Ş

3242

3122

```
AACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAAT
                              CAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACA
                                                                                                                                                                                                                                  AAATCTGCTTATCGCTACGACGGTGGCAGAGGAGGACCTGGATATCAAAGAGTGCAATAT
                                                                                                                                                                                                                                                                                                                           ATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGCAGTGAGTT
                                                                                                                                                                                                                                                                                                                                                                    CTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGAATTACTGAAAATGAAAA
                                                                                                                                                                                                                                                                                                                                                                                              TACTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTTGCAGTCATAGAAGA
                                                                                                                                TGAGACAGTT
                                                                                                                                                                                                      TGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGC
                                                                                                                                                                                                                                            CAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACAT
                                                                                                                                                                                                                                                                                    CAAACCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAAT
                                                                                                                                                                                                                                                                                                                 GTTTGCGGAAGTTGGAGTCAAAGCGCATCACCTGATTGGCGCGGGGCACAGCAGTGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                           ATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGACAGCGACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAAATGGAAAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAAGAACGTGTTTGTGCAGAAACA`
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAAGCCCATGACTCAGACTGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGCGAAAT
                                                                                                            GTGATGACGAGGCCAGCAGTTGCAATGACCAACTTAAGGGCGATGT
                                                                                                                                                ---CAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1976
                                2942
                                                                                         2816
                                                                                                              2822
                                                                                                                                 2756
                                                                                                                                                     2762
                                                                                                                                                                        2696
                                                                                                                                                                                            2702
                                                                                                                                                                                                               2636
                                                                                                                                                                                                                                   2642
                                                                                                                                                                                                                                                      2576
                                                                                                                                                                                                                                                                                                                                      2456
                                                                                                                                                                                                                                                                                                                                                        2462
                                                                                                                                                                                                                                                                                                                                                                             2396
                                                                                                                                                                                                                                                                                                                                                                                                2402
                                                                                                                                                                                                                                                                                                                                                                                                                   2336
                                                                                                                                                                                                                                                                                                                                                                                                                                       2342
                                                                                                                                                                                                                                                                                                                                                                                                                                                          2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2045
                                                                       2882
                                                                                                                                                                                                                                                                                                                 2522
  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뫄
  31-JAN-2000;
04-FEB-2000;
24-FEB-2000;
02-MAR-2000;
16-MAR-2000;
17-MAR-2000;
18-APR-2000;
19-MAY-2000;
28-JUN-2000;
28-JUN-2000;
30-JUN-2000;
30-JUN-2000;
11-JUL-2000;
11-JUL-2000;
11-JUL-2000;
11-JUL-2000;
14-JUL-2000;
                                                                                                                                                                                                                                                               Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase ligase; hyperproliferative disorder; immunodeficiency disorder; autoimmune disorder; neurological disorder; metabolic disorder; inflammatory disorder; cardiovascular disorder; reproductive disorder; blood-related disorder; infectious disorder; gene therapy; cytostatic; anti arthritic; nephrotropic; anticoagulant; ss.
                                                                                                                                                                                                                                                                                                                                                         17-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                AAS40960
                                                                                                                                                                                                                          WO200155301-A2
                                                                                                                                                                                   JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  3363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3177
                                                                                                                                                                                                                                                                                                                                    encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTT
                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTATGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGAGGATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACACTTCTCTGCAAAAATTGTAGCATGCTGGTCTGCTCGGGAGAA
 2000US-0179065P.
2000US-0184664P.
2000US-0186350P.
2000US-0189874P.
2000US-0198123P.
2000US-0205515P.
2000US-020467P.
2000US-0214886P.
2000US-0214886P.
2000US-0214886P.
2000US-0214880P.
2000US-0217487P.
2000US-0217487P.
2000US-0217486P.
2000US-0217496P.
2000US-0218290P.
                                                                                                                                                                                   2001WO-US001239
                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                      novel
                                                                                                                                                                                                                                                                                                                                                                                                 cDNA;
                                                                                                                                                                                                                                                                                                                                      human
                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                                      enzyme
                                                                                                                                                                                                                                                                                                                                                                                                 BP.
                                                                                                                                                                                                                                                                                                                                     polypeptide
                                                                                                                                                                                                                                                                                                        yase; isomerase;
isorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ААТААА 3348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACATTGTAAGAGA 3062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NACATCCATGTCAT 3002
                                                                                                                                                                                                                                                                                                                                                                                                                                                  IGTAGA 3414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAACATTGAATATG 3362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JAGATTATCTGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACATTGTAAGAGA 2996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MACATTTAATATG 3296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCCTTGTCTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTTGTATAGTGA 3302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTTATTTAGTGA 3236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTACAAGAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATACAAAAAGTG 3176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCCTTGTCTCAA 3116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAATCATCTGCAA 3056
```

S

2697 2703

멍 ર્શ 뮹

2757

5

성 함

В 5 В ş

2643 2577

2637

밁 5

2583

뮍 ঠ 5

2397

윱

2463

2457

Дb 5

2403 2337 2343 2277 2283 2217

뮍 S 멍 Ś 망 S

2223

유

2097

В ঠ 5

밁

2046 1977 B र्ठ 뮹 S

1986

1917

1926

```
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
17-NOV-2000;
11-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
11-DEC-2000;
11-DEC-2000;
11-DEC-2000;
11-DEC-2000;
11-DEC-2000;
11-DEC-2000;
The present invention relates to the isolation of novel human enzyme polypeptides (AAU22915-AAU23814), and the cDNA and genomic sequences encoding them. The enzyme polypeptides of the invention may comprise the functional classes of oxidoreductases, transferases, hydrolases, lyases, isomerases or ligases. The sequences of the invention are useful in the diagnosis, treatment, prevention and/or prognosis of a wide range of disorders including hyperproliferative disorders (e.g. cancer), immunodeficiency disorders (e.g. AIDS) autoimmune disorders (e.g. arthritis), neurological disorders (e.g. Alzheimer's disease), metabolic disorders (e.g. phenylketonuria), inflammatory disorders (e.g. asthma), cardiovascular disorders (e.g. atherosclerosis), blood-related disorders (e.g. haemophilia), reproductive disorders (e.g. infertility) and infectious disorders (e.g. Influenza). The polynucleotides of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 20
P-PSDB;
                                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                                                                                                                                                                                                       Novel polypeptides and preating neural, immune cardiovascular, renal, presented to the cardiovascular of the c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HUMAN
                                                                                                                                                                                                                                                                                                                 SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000US-0246476P.
2000US-0246523P.
2000US-0246523P.
2000US-0246523P.
2000US-0246528P.
2000US-02466526P.
2000US-02466526P.
2000US-02466528P.
2000US-0246610P.
2000US-0246611P.
2000US-0249209P.
2000US-0249211P.
2000US-0249218P.
2000US-0249218P.
2000US-02518P.
2000US-0251868P.
2000US-0251868P.
2000US-0251989P.
2000US-0251989P.
2000US-0251989P.
2000US-0251989P.
                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENOME
                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sc,
                                                                                                                                                                                                                                                                                                                   186;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCI
                                                                                                                                                                                                                                                                                                                                                       polynucleotides useful for diagno system, muscular, reproductive, proliferative disorders and cance
                                                                                                                                                                                                                                                                                                                1180pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INC
                                                                                                                                                                                                                                                                                                                English.
```

pulmonary, rous diseases. sing, preventing,

26-JUL-2000 14-AUG-2000 14-AUG-2000 14-AUG-2000 14-AUG-2000 14-AUG-2000 14-AUG-2000 14-AUG-2000 14-AUG-2000 12-AUG-2000 22-AUG-2000 22-AUG-2000 01-SEP-2000 01-SEP-2000 01-SEP-2000 08-SEP-2000 08-SEP-2000 14-SEP-2000 13-OCT-2000 20-OCT-2000 20-OC

2000US-0224518P.
2000US-0225213P.
2000US-0225214P.
2000US-0225266P.
2000US-0225266P.
2000US-0225275P.
2000US-0225275P.
2000US-0225275P.
2000US-0225275P.
2000US-0225275P.
2000US-0226681P.
2000US-0226681P.
2000US-02271888P.
2000US-02271888P.
2000US-02271888P.
2000US-02271888P.
2000US-02271888P.
2000US-02271888P.
2000US-02271888P.
2000US-02271888P.
2000US-02271888P.
2000US-023737P.
2000US-0231244P.
2000US-0231244P.
2000US-0231244P.
2000US-0231244P.
2000US-0231244P.
2000US-0231244P.
2000US-0231248P.
2000US-0231248P.
2000US-0231248P.
2000US-0231249P.
2000US-0231249P.
2000US-0231249P.
2000US-0231249P.
2000US-0231249P.
2000US-0231248P.
2000US-0231249P.
2000US-0231248P.
2000US-0231249P.
2000US-0231249P.
2000US-0231288P.
2000US-0234178P.
2000US-02341788P.
2000US-0241886P.
2000US-0244617P.
246474P.

ន្តន្តន្តន្តន្ត

961

```
Query Match 55.8%;
Best Local Similarity 98.5%;
Matches 1941; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            invention can also be used in gene therapy. AAS40785-AAS41684 represent cDNA sequences encoding for the novel human enzyme polypeptides of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                1527
                                                                                                                                                                                                                                                                                                                                                                                                1467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1227
                                               1887
                                                                                                                                               1767
                                                                                                                                                                                                1707
                                                                                                                                                                                                                                               1647
                                                                                                                                                                                                                                                                                                1587
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1167
                                                                                                .827
                                                                                                                                                                                                                                                                        542
                                                                                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                                                                         422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                         842
                                                                                                                      722
                                                                                                                                                                       662
                                                                                                                                                                                                                       602
                                                                                                                                                                                                                                                                                                                                                                                                                        362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                        CCGCAAGGAGTTCCAACCATTTTTGAAGAAATGGTATTCGTGTTATTGGATTAAGTGGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGAAAAACCAGAGTGGCTGTTTACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAAGTTGCCCAGCCAGCCTTGGAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAGAATGTGGCAGCAAGAGCATCCCCGGAGCCAGAACTCCAGCTCAGGCCTTACCAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1967 BP;
AAATCGCAAAGAACGTGTTTGTGCAGAACATTTGAGGAAGTACAATGAGGCCCTACAAAT
                                                                                                                                                                                                                        TGGAGGGGCCACGAAGCCAAAGCTGAAGAACACATTTTAAAAACTATGTGCCAATCT
                                                                                                                                                                                                                                     TGGAGGGGCCACGAAGCCAAAGCCGAAGACACATTTTAAAACTATGTGCCAATCT
                                                                                                                                                                                                                                                                        AGAAAACAAACCAGTGATTCCCCTTCCTCAGATACTGGGACTAACAGCTTCACCTGGTGT
                                                                                                                                                                                                                                                                                        AGAAAACAAACCAGTGATTCCCCCTTCCTCAGATACTGGGGACTAACAGCTTCACCTGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTCAAATCCTTGAAAACTCCCTCTTAAACTTGGAAAAATGGAGAAGATGCTGGTGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TACCCAACTGAAAATATCATTTCCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACCCAACTGAAAATATCATTTCCAGAAGTTGTCAAGTCCTGTGATATTATTATTCAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGAAAAACCAGAGTGGCTGTTTACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAAGTTGCCCAGCCAGCCTTGGAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAG
                                         ACTTCTAGAAATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATCTGAGCCTGGAAAAGTTATAGTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 1878; D
Pred. No. 0;
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>ତ୍</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         u;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                1886
                                                                                                                                                1826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1346
                                                                                                                                                                                                                                               1706
                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                1646
                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1166
                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                   유
                                                                                 Дb
                                                                                                    Ś
                                                                                                                             Дb
                                                                                                                                                     S
                                                                                                                                                                                                                                  Б
                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                   5
                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
completed:
                                                                                                                                                       2,847
                                                                                                                                                                                                          2787
                                                                                                                                                                                                                                    1678
                                                                                                                                                                                                                                                                                    1618
                                                                                                                                                                                                                                                                                                                                    1561
                                                                                                                                                                                                                                                                                                                                                                                    1501
                                                                                                                                                                                                                                                                                                                                                                                                             2547
                                                                                                                                                                                                                                                                                                                                                                                                                                     1442
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      902
                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTCATTAGTAAATTTCGCACTGGAAAAATCAATCTGCTTATCGCT.
                                                  AGAATTCAAGGAACTTTACATTGTAAGAGAAAACAAAGCACTGCAAA
                                                                                                  AGCCTGTTCTGGGGAAGATATCCATGTAATTGAGAAAATGCATCAC
                                                                                                                                               CAAGCATTACAAGAATAACCCATCACTAATAACTTTCCTTTGCAAAA
                                                                                                                                                                                                                                                   GATGTATAAAGCTATACATTGTGTTCAAAATATGAAAACCAGAGGAGT
                                                                                                                                                                                                                                                                                                 TGCTCACAGTGGTTCAGGAGTTATCGAACATGAGACAGTTAATGAT1
                                                                                                                                                                                                                                                                                                                                                  AATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGAGCTGATGAGAGC:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTTCCCAGTGGATTACTGAAAAATGAAAAATTTGCTGAAGTAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAGGACTGAGGAATCAGCACGAGGAATAATCTTTACAAAAACACGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTGTGATGGTGATGAAGAAGATGAGGATTTAAAGAAACCTTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAGCATTACAAGAATAACCCATCACTAATAACTTTCCTTTGCAAAA
                                                                                                                                                                                                                                                                                                                                                                                                AGAAGGTCTGGATATTAAAGAATGTAACATTGTTATCCGTTATGGT(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTGATTGGAGCTGGACACAGCAGTGAGTTCAAACCCATGACACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCCAGAATATGAAAATGAAAAGCTGACCAAATTAAGAAATACCATAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAGAATATGAAAATGAAAAGCTGACCAAATTAAGAAATACCATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAGATTTCTCATGACTTTATTTTTTGAAAACAATAAAATGTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAAGATAAGAAGTTTGCAGTCATAGAAGATGATAGTGATGAGGGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAATGACACAATTCGAATGATAGATGCGTATACTCATCTTGAAACTT
                                                                                    AGCCTGTT
                                                                                                                                                                                                   TTTGGAATTACAGATGCAAAGTATAATGGAAAAGAAAATGAAAACCU
                                                                                                                                                                                                                                     GATGT
                                                                                                                                                                                                                                                                                                                                                                                     AGAAGGTCTGGATATTAAAGAATGTAACATTGKTATCCGTTATGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGATTGGAGCTGGACACAGCAGTGAGTTCAAACCCATGACACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAAGATAA
March
                                                                                                                                                                                                                                     ÀTCATTGKGTTCAÀATÀT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ||||||||||||
|ATGAACAAAAAGA 1441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCAAAGCCCACCA 2426
||||||||||||
TCAAAGCCCACCA 1381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGCCCTACAAAT
                                                                                                                                                                                                                                                    ATGCTCATAAGAT 2786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGAGCAATATAC 2306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ĠĠĊŢĠĠĊŢĠĄĄĄĄ 1201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KGTGATGATGAGTA 2126
||||||||||
ETGATGATGAGTA 1081
                                    ÀGÀA 1965
                                                            AGAA 3017
                                                                                     TCAATATGACCCC 1914
                                                                                                    TCAATATGACCCC 2966
                                                                                                                                ACTGCAGTGTGCT 1854
                                                                                                                                                                                   AGAGAAATATTGC 2846
|||||||||||
AGAGAAATATTGC 1794
                                                                                                                                                                                                                                                                                                                                     CCTACGT-CTGGT 1617
                                                                                                                                                                                                                                                                                                                                                                                   TCGTCACCAATGA 2606
                                                                                                                                                                                                                                                                                                                                                                                                                                     CCACAGTGGCAGA 1500
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCACAGTGGCAGA 2546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGAACAAAAAGA 2486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTGGCTGAAAA 2246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGATGAAACAGA 2186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTATAATGAAGA 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTATAATGAAGA 2066
                                                                                                                                                                                                                                                                                                                                                              CCTACGTCCTGGT 2666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAGTGCATATGC 2366
                                                                                                                                                                                                                                 TGCTYATAAGAW 1734
                                                                                                                                                                                                                                                                                                   AGAGTGCATATGC 1321
                                                                                                                                                   CTGCAGTGTGCT 2906
                                                                                                                                                                                                                                                                                    CCGAGAGAAGAT 1677
```

ş

В 8 멍 S 8 S Ş

8

S В र्

B

밁

ঠ

В

В S

8

밁

당

δ 밁 S 8

g Ş 밁 र् 뎡 ঠ

Job time : 1898 secs

*>,

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
Perfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number
                                                                                                                                                   a
                                                                                                                                                                                                                           Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                 No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being predicted by analysis of the total score distribution.
  3052.6
2861
1393
1367.4
900.4
900.8
801.8
801.8
801.8
728.2
718.8
7711.6
652.8
654.4
652.8
625.4
625.4
618.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
Bd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         score:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq
geq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST: +

1: 9b

2: 9b

4: 9b

5: 9b

7: 9

7: 9

10: 11:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length: 0 length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                              %
Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41078325 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gapop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-515-363C-1
3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March 13,
    90.7

85.0

441.4

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5

40.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gcgcgccggcctgagagccc.....aaaatgattgttttactctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gb_est1: *
gb_est2: *
gb_est3: *
gb_htc: *
gb_est4: *
gb_est5: *
gb_est5: *
gb_est6: *
gb_est7: *
gb_gss1: *
gb_gss3: *
                                                                                                                                                                                                                                                                                                                                                                                                                                Length
    3078
3078
2304
2331
11013
11174
1115
870
918
755
1035
729
781
781
653
1046
627
1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2006, 18:48:11; Search time 11783 Seconds (without alignments)
13361.498 Million cell upo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore
(c) 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                  BB
     44000000000000000040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23393541228 residues
 DQ050961
AK037057
AK040519
BQ233683
BU902097
BM467983
BQ960157
BU189982
BQ772836
BF983236
DR422160
CA423868
BG741146
BF686405
CR752055
BM476961
BX492926
BX492926
BX492926
BX492926
BX492926
BX492926
BX492926
BX492926
                                                                                                                                                                                                                                                                                                                                                                                                                                  딤
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           version
- 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.1.7
Biocceleration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82156650
DQ050960 Homo sapi

DQ050961 Pan trog1

AK037057 Mus muscu

AK040519 Mus muscu

BQ233683 AGENCOURT

BU902097 AGENCOURT

BU902097 AGENCOURT

BM467983 AGENCOURT

BQ960157 AGENCOURT

BQ960157 AGENCOURT

BQ772836 UI-H-FE0-

BF337464 602035195

BF983236 602305873

DR422160 nav08g05.

CA423868 UI-H-FE1-

BG741146 602631817

BF686405 602143786

CR752055 DKFZD469M

BM476961 AGENCOURT

BX492926 DKFZD781C

BE882040 601505326

AK018602 Mus muscu

BM467774 AGENCOURT
                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           printed,
```

ALIGNMENTS

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1
DQ050960
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                       ORIGIN
                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
 Query Match
Best Local Similarity
Matches 3055; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HITLE
                                                                                                                       gene
                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens MDA5 gene, very genomic survey sequence. DQ050960 DQ050960.1 GI:66904159 GSS.
                                                                                                                                                                                                                                                        2 (bases 1 to 3078)
Nielsen,R., Bustamante,C., Clark,A.G., Glanowski, Hubisz,M.J., Fledel-Alon,A., Tanenbaum,D.M., Cive White,T.J., Sninsky,J.J., Adams,M.D. and Cargill, Direct Submission
Submitted (05-MAY-2005) Celera Genomics, 45 West Rockville, MD 20850, USA
This sequence was made by sequencing genomic exon them based on alignment. Translation starts at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hominidae; Homo.

1 (bases 1 to 3078)

1 (bases 1 to 3078)

Nielsen,R., Bustamante,C., Clark,A.G., Glanowski,S., Sackton,T.B.,
Hubisz,M.J., Fledel-Alon,A., Tanenbaum,D.M., Civello,D.,
White,T.J., Sninsky,J.J., Adams,M.D. and Cargill,M.
A Scan for Positively Selected Genes in the Genomes of Humans and
                                                                                                                                                                                                                                           alignment
                                                                                                                                                                                                                                                                                                                                                                                                                   15869325
                                                                                                                                                                                                                                                                                                                                                                                                                                         Chimpanzees (er) PLoS B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DQ050960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (human)
90.7%;
nilarity 99.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      PLoS Biol. 3 (6), E170 (2005)
                                                                                                                   /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
/chromosome="2"
<1. .>3078
                                                                                  /gene="MDA5"
/locus_tag="HC18981"
                                                                                                                                                                                                           1. .3078
                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrate Euarchontoglires; Primates;
  Score 3052.6;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3078 bp
VIRTUAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TRANSCRIPT, part
                                       DB 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linea
                                    Length 3078;
                                                                                                                                                                                                                                                             exons and ordering at the beginning of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nta; Euteleostomi;
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                   ,S., Sackton,T.B., ello,D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  r GSS 02-JUN-2005 ial sequence,
                                                                                                                                                                                                                                                                                                                  Gude Drive,
```

0

23;

Indels

0; Gaps

• ОУ	B 8	Qy db	Qу	Qy db	D Q	8 8	B 8	D Qy	Db Qy	유 왕	Db Qy	Qy db	B &	D Qy	용 성	d Q	B 8	
89 TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAC 	1129 GAAGGGAAGAATATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTT 1188 	1069 TCCCCGGAGCCAGACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	1009 GGCAGTGATTCAGGCACCATGGGAAGTGAATTCAGATGAAGAAATGTGGCAGCAAGAGAGA 1068 	949 AGTTTGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATG 1008 	889 GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACA 948 721 GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACA 780		769 GATTGCTCAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTG 828 	709 TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCT 768 	'AAAAAGGATTGTGCA 'AAAAAGGATTGTGCA		529 CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAG 588 		409 GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCGCTACATGAACCCTGAGCTCACG 468	349 CTGCTGCTGAGCACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGG	289 GAGGTGAAGGAGCAGATTCAGAGGACAGTCGCCACCTCCGGGAACATGCAGGCAG	229 AGGGTGAAAATGTACATCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTCTGCCTGC	69 ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCC 2	
& & &	Db Q	}) B &	g &	? B &	2 B	2 B 4	S & S	S B S	D	?	? B &	\$ \$	g	S B \$	S B	δο 40	Q Q
2269 CTGACCAAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGA 2328	209 TTIGAMACAATAMATGIIGAWAAGGCIGGCIGAAAACCCAGAATATGAAAAATGAAAAAG 210 041 TTTGAAAACAATAAAATGTTGAAAAGGCTGGCTGAAAACCCAGAATATGAAAAATGAAAAAG 210	149 GAIGAIIIAAAGAAACCIIIGAAACIGGAIGAAACAGAIAGAI	UNS ATAGAMGATGATAGIGAIGAGGGIGGIGAIGAIGAGATATTGTGATGATGATGAAGATGAAGATGAGATGAGATGAAGAA	861 GATGCGTATACTCATCTTGAAACTTTCTATAATGAAGAAAGA	969 GCAGAACATTIGAGGAAGIACAAIGAGGCCCTACAAIIAATIGACACAATTCGAATGAATGATA 202 801 GCAGAACATTTGAGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGAAT	741 TGGGCCATTCAAATGGAAAAAAAGCTGCAAAAAGAAGAAATCGCAAAAGAACGTGTTTGT 180	681 ATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAA 174		61	501 ANAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATGCCATTTACTATTAAAACT 156	CO DA COTTO TO A CARTACT GORDAN CARTANA CARTACTA TO CARTACTA CONTROL TO CARTACTA CONTROL TO CARTACTA C	TATTIGATGCAGAAGTTGAAAAAACAATAGACTCAAGAAAGAAAACAAAC	*89 AICAIGAIGANGICAICACACAMAGANGCAGIGIAIANACAICAIGNGCAGGCAT 13 321 ATCATTGATGAATGTCATCACACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCAT 13	261 CTCTTAAACTTGGAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCATT 13		141 TIGAAGAAATGGTATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATT 141 CCAGAAGTTGTCAAGTCCTGTGATATTATTATTAGTACAGCTCAAATCCTTGAAAACTC	081 GTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCG	CGCAAGGA

```
RESULT 2
DQ050961
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                      र्
                                                                                                                                            망
                                                                                                                                                       ঠ
                                                                                                                                                                               망
                                                                                                                                                                                              Ş
                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                          д
                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                    DЪ
                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                   д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                             3169
                                                                                                                          3229
                                                                                                                                                                                  2941
                                                                                                                                                                                                                      2881
                                                                                                                                                                                                                                                                                                 2761
                                                                                                                                                                                                                                                                                                                                                                                              2809
                                                                                                                                                                                                                                                                                                                                                                                                                 2581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2161
                                                                                                                                                                                                                                                                                                                                                                                                                                   2749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2221
DQ050961
Pan troglodytes N
genomic survey se
DQ050961
DQ050961.1 GI:66
GSS.
Pan troglodytes
                                                                                                                                                                                                                                                           ATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGT
                                                                                                        TTTAGTGATGAGGATTAG
                                                                                                                                            ATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCT
                                                                                                                                                                                                                                                                                                                                     GGAAAAATCAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTGAGTTCAAACCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGAAAAATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTAGTGATGAGGATTAG
                                                                                                                                                                                                                       ATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAAAAATAAAT CTGCTTAT CGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTGANNNNNNNNNNNNNNNNNNAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGAAAATTTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGC
                    GI:66904160
                                     MDA5 gene, sequence.
 (chimpanzee)
                                                                                                       3078
                                                                                                                          3246
                                                 3078 bp
1e, VIRTUAL
                                              DNA linear GSS TRANSCRIPT, partial :
                                                         02-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2508
                                                                                                                                             3060
                                                                                                                                                              3228
                                                                                                                                                                                  3000
                                                                                                                                                                                                   3168
                                                                                                                                                                                                                                        3108
                                                                                                                                                                                                                                                            2880
                                                                                                                                                                                                                                                                               3048
                                                                                                                                                                                                                                                                                                 2820
                                                                                                                                                                                                                                                                                                                    2988
                                                                                                                                                                                                                                                                                                                                       2760
                                                                                                                                                                                                                                                                                                                                                          2928
                                                                                                                                                                                                                                                                                                                                                                            2700
                                                                                                                                                                                                                                                                                                                                                                                              2868
                                                                                                                                                                                                                                                                                                                                                                                                                  2640
                                                                                                                                                                                                                                                                                                                                                                                                                                   2808
                                                                                                                                                                                                                                                                                                                                                                                                                                                       2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2220
                                                                                                                                                                                                                       2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                 뫄
                                                                                                                                                                  B
                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                             멍
             뮹
                                 ঠ
                                                        뮍
                                                                       중 유
                                                                                                            5
                                                                                                                                               ঠ
                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 2867; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15869325
2 (bases 1 to 3078)
2 (bases 1 to 3078)
Nielsen,R., Bustamante,C., Clark,A.G., Glanowski,S.
Hubisz,M.J., Fledel-Alon,A., Tanenbaum,D.M., Civell
White,T.J., Sninsky,J.J., Adams,M.D. and Cargill,M.
Direct Submission
Submitted (05-MAY-2005) Celera Genomics, 45 West Gu
Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons
them based on alignment. Translation starts at the
alignment.
                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                   121
                                                                                              361
                                                                                                                 529
                                                                                                                                   301
                                                                                                                                                       469
                                                                                                                                                                       241
                                                                                                                                                                                           409
                                                                                                                                                                                                                               349
                                                                                                                                                                                                                                                                    289
                                                                                                                                                                                                                                                                                                                                                  169
                                                                                                                                                                                                                                                                                                          229
                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                              \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 3078)
Nielsen,R., Bustamante,C., Clark,A.G., Glanowski,S., Sackton,T.B., Hubisz,M.J., Fledel-Alon,A., Tanenbaum,D.M., Civello,D., White,T.J., Sninsky,J.J., Adams,M.D. and Cargill,M.
A Scan for Positively Selected Genes in the Genomes of Humans and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pan troglodytes
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A Scan for Posit
Chimpanzees
(er) PLoS Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hominidae; Pan.
                                                                                                                                   GACTTGCCCTCTCCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTC 528
                                                                                                                                                                       GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCGCTACATGAACCCTGAGCTCACG
                                                                                                                                                                                                                                                                                       AGGGTGAAAATGTACATCCAGGTGGAGCCTGTGCTGGACTACCTGA
                                                                                                                                                                                                                                                                                                                             ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCT
                                                                                                                                                                                                                                                  GAGGTGAAGGAGCAGATTCAGAGGGACAGTCGCCACCTCCGGGAACA
                    GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAG.
                                                                                                        CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAG 588
                                                                                                                                                                                                            TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAG
                                                                                               CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGG
                                                                                                                                                                                                                       85.0%;
nilarity 93.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Pan troglodytes"
/mol_type="genomic DNA"
/db_xref="taxon:9598"
<1...>3078
/gene="MDA5"
/locus_tag="HC18981"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 (6),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebra
Euarchontoglires; Primates;
                                                                                                                                                                                                                                                                                                                                                                 Score 2861; D
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (2005)
                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                    211;
                                                                                                                                                                                                                                                                                                                                                                                      11;
                                                                                                                                                                                                                                                                                                                                                                    Indel
                                                                                                                                                                                                                                                                                                                                                                                    Length 3078;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exons and ordering at the beginning of
                                                                                                                                                                                                                                                                                                                              CGTGCTTCAGGGCC 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ,S., Sackton,T.B., ello,D.,
                                   ACTGGTTCTCTGCA 708
                                                          ACCCTGAGCTCACG 300
                                                                                                                                                                                                               CTCGGGAATTCGTG
                                                                                                                                                                                                                                                                TGCAGGCAGTTGAA 348
                                                                                                                                                                                                                                                                                                     CCTTTCTGCCTGCA 288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ta; Euteleostomi;
Catarrhini;
   AGTTAACAGGCTCT 768
                                                                              AAAACAATGGAAAT 648
                                                                                                                                                                                                                                                   TGCAGGCAGTTGAA 180
                                                                                                                                                                                                                           TCGGGAATTCGTG 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gude Drive,
                                                                                                                                                                                                                                                                                         CTTTCTGCCTGCA 120
                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                  Gaps
                       540
                                                           480
                                                                                                420
                                                                                                                                                                                           468
                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                    0;
```

8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	S B S B S B
AGTITIGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACGACCATTGTTTGGCAGAAGGAAG	
8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6	\$ \$ \$ \$ \$ \$
1801 GENGNÁCHTÍTANGENÁGTICHACHANTTICHÁCHÁCTÁTÍTACHÁCHÁCTÁTÍTACHÁCHÁCTÁTÍTANGENÁGTÁTÁ 1860 2022 GATGCOTRATCACTCATTCTANACTTTCTATATTCAGAGGAANACHANACHACHAGTTTCCAGT 2083 ATRABAGATTACTCATCTANACTTTCTATATCATAGAGAANACHANACHATTCCAGTCTCATC 2083 ATRABAGATTATAGAANACTTTCTANACGGTTGATTCTATATCAGAGATTAACAATTTCCAGTCTTTCAATCTATTCTATAGAANACTTTCTATAGAAACTTTAATTT 2143 (ANTIGATTANAGANACCTTTGAAACCTGGATGAAACAATAACAATTTCTCATGATCAAACAATTAATT	621 ATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTNNNAGAAATAATGACAAGG 168 849 ATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAA 190 849 ATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTTGGAACTCAACCCTATGAACAA 190 681 ATTCAAACTTATTGTCAAATGAAGTCCAAATGTCAAATGTTTTGGAACTCAACCCTATGAACAA 174 909 TGGGCCATTCAAATGGAAAAAAAGCTGCAAAAAAAAAGGAAATCGCAAAGAACGTGTTTGT 196

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                       JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
AK037057
                                         JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                  TITLE
                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence.
AK037057
Nature
5
The FAN
Group F
                                                                                                                                                                          Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                   Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10 (10), 1617-1630 (2000)
                                                                               The RIKEN Genome Exploration Research FANTOM Consortium.
Functional annotation of a full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eut
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AK037057

2304 bp mRNA linear HTC 03-APR-2000 musculus adult female vagina cDNA, RIKEN full-length enriched library, clone:9930105B04 product:similar to MELANOMA DIFFERENTIATION ASSOCIATED PROTEIN-5 [Homo sapiens], full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AK037057.1 GI:26331913
HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                     11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCCAGAATTCAAGGAACTTTACATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTAGTGATGAGGATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTAGTGATGAGGATTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCT
    FANTOM Consortium a
up Phase I & II Team
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         musculus (house mouse)
                                                               409,
                                                               685-690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTA
                                                                 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3246
                        and
                          the
                                                                                full-length
                          RIKEN
                          Genome
                                                                                                                     Group
                                                                                   mouse
                        Exploration
                                                                                                                          Phase
                                                                                  CDNA
                                                                                                                          Ϊ
                                                                                   collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                        Team and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     enriched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2988
```

S

121 CAGCACCATCTGCTTGGGAGAACCCTCTCCC-TTCTCTGAGAAAGA

435;

Indel

7;

Gaps

u T

AAGATGTCGAATGG 179

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
Query Match
Best Local Similarity 79.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

Nature 420, 563-573 (2002)

6 (bases 1 to 2304)

8 Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tanaka, T., Tomaru, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.

Direct Submission

C. Shinaki, T., Tomaru, A., Toya, T., Yasunishi, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.

Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  prepare mouse tissues.

Please visit our web site for further details.

URL:http://genome.gsc.riken.jp/.

URL:http://fantom.gsc.riken.jp/.

Location/Qualifiers
                                                                                                                                                                                                                                    /codon_start=1
/protein_id="BAC29687.1"
/protein_id="BAC29687.1"
/protein_id="BAC29687.1"
/protein_id="BAC29687.1"
/db_xref="GI:26331914"
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSAEDSFRNLINDVLDTCFEKGLLTVEDRNRISAAGNSGN
/translation="MSIVCSAEDLLLTLLQPTLVDKLLINDVLDTCFEKGLLTVEDRNRISAAGNSGN
ESGVRELLRRIVQKENWFSTFLDVLRQTGNDALFQELTGGGCPEDNTDLANSSHRDGP
ESGVRELLRRIVQKENWFSTFLDVLRQTGNDALFQELTGESUTSLAEGSVSCFDESLGH
NSNMGRDSGTMGSDSDESVIQTKRVSPEPELQLRPYQMEVAQPALDGKNIICLPTGS
GKTRVAVYITKDHLDKKQASESGKVIVLVNKVWHLAEQLFRKEFNPYLKKWYRIIGLS
GBTQLKISFPEVVKSYDVIISTAGILENSLINLESGDDDGVQLSDFSLIIIDECHHTN
KEAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPGILGLTASPGVGAAKKQSEAEKHIL
NICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLEIMASIQTYC
QKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEALQINDTIRMIDAY
SUTETFFTDEKEKKFAVLNDSDKSDDEASSCNDQLKGDVKKSLKLDETDEFLMNLFFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="unnamed protein product; putative similar to MELANOMA DIFFERENTIATION ASSOCIATED PROTEIN-5 [Homo sapiens] (SPTR | Q9H3G6, evidence: FASTY, 75.6%ID, 67.6%length, match=2079)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /tissue_type="vagina"
/clone_lib="RIKEN full-length
/dev_stage="adult"
224 _ ~2202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="FANTOM_DB:9930105B04"
/db_xref="taxon:1000"
/clone="9930105B04"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . .2304
                                                              41.4%;
                             Score 1393; D
Pred. No. 0;
0; Mismatches
                                                                                                                DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          enriched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mouse cDNA library"
                                                                                                                2304;
```

1197 CAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGT 1256 	175 CCGCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	
RESULT 4 AK040519 LOCUS AK040519 2331 bp mRNA linear HTC 03-APR-2004	OY 1257 CANTAGOTACTIC/TROTTGALCACTIC/TCCGAMGAGGTTCCAMCCATTTTCAMGAM 1316 1315 CANTAGOTACTOTTCCGAMCCACTTTCCGAMCACCATTTCCAMCACCATTTCCAMCACCATTTCCAMCACCATTTCCAMCACCATTCCATTCCATTCCATTCAMCACCATTCCATTCCATTCCATTCAMCACCATTCCAMCACCATTCCAMCACCATTCCATTCCATTCAMCACCATTCCATTCCATTCCATTCATT	

```
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                      LL Nature 409, 685-690 (2001)

5

The FANTOM Consortium and the RIKEN Genome Exploration Research Group Phase I & II Team.

Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

LN Nature 420, 563-573 (2002)

6 (bases 1 to 2331)

18 Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AK040519
AK040519.1 GI:263
HTC; CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11042159
3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10 (10), 1617-1630 (2000)
                                                                                 Mus musculus 0 day neonate thymus cDNA, RIKEN full-length enriched library, clone:A430105A06 product:similar to MELANOMA DIFFERENTIATION ASSOCIATED PROTEIN-5 [Homo sapiens], full insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA Meth. Enzymol. 303, 19-44 (1999)
cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Ri Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FANTOM Consortium.
Functional annotation of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
Carninci, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eut
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The RIKEN Genome Exploration Research Group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 full-length mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on functional annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Phase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                II Team and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                               (GSC),
                                                                                                                                                                                                                         0£
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genes
                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                     5
                                                                                         В
                                                                                                                               Ś
                                                                                                                                                                              밁
                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local
Matches 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                    480
                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                      474
                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                          414
                                                                                                                                                                                                                                                                                                                                                                                                                                                  354
```

```
al Similarity
1663; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              URL:http://genome.gsc.riken.jp/
URL:http://fantom.gsc.riken.jp/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Please visit our web site for further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTTCTGCAGAGGACAGCTTCAGGAATCTCATCTTATTCTTCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGG
                                                                                                                                                                                                                                                                                     CACCTTGGAGCAGGGACAATGGCCTCTGGGATGGACGCAGATGTTC
                                                                                                                                                                                                                                                                                                                  CACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCC
                                                                                                                                                                                                                                                                                                                                                                                    GCAGATTCTTAAAAAGATCAACACCTGTGGTAACACCAGCGCGCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                 GTACATTCAGGTGGAGCCAGTGCTGGACCACCTCATCTTTCTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTACATCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTCTGCCTX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCGCCCGCCCGGGAGACTCCTCTCCCATTTCCTGAGACCTCACGATGTCGATTGT 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCACCATCTGCGTTGGGAAACCCTCTCCC-TTCTCTGAGAAAGAA
                                                                                                                                                                                      GCACAGTGGCAATCCCCTAGCCGCGCGCTATGTCAAACCCCACACTC
                                                                                                                                                                                                                                    GAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCCTGAGCTCACGGACTTGCCCCTC
                                      TCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATG
                                                                                                                                   тссатсетттередалестсатертерататетстссвастестерас
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40.6%;
ilarity 79.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /codon_start=1
/proteIn_id="BAC30614.1"
/proteIn_id="BAC30614.1"
/db_xref="GI:26333793"
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
QILKKINTCGNTSAAELLLSTLEOGOWPLGWTOMFVEALEHSGNPLAARYVKPTLTDL
PSPSSETAHDECLHLLTLLQPTLVDKLLINDVLDTCFEKGLLTVEDRNRISAAGNSGN
ESGVRELLRRIVQKENWFSTFLDVLRQTGNDALFQELTGGGCPEDNTDLANSSHRDGP
AANECLLPAVDESSLETEAWNVDDILFBASCTDSSVTTESDTSLAEGSVSCFDESLGH
NSNMGRDSGTMGSDSDESVIQTKRVSPEPELQLRPYQMEVAQPALDGKNIIICLPTGS
GKTRVAVYITKDHLDKKKQASESGKVIVLVNKVMLAEQLFRKEFNPYLKKWYRIIGLS
GKTRVAVYITKDHLDKKKQASESGKVIVLVNKVMLAEQLFRKEFNPYLKKWYRIIGLS
GKTVAVYITKDHLDKKKQASESGKVIVLNKUMLAEQLFRKEFNPYLKKWYRIIGLS
GKTVAVYITKDHLDKKKQASESGKVIVLNKVMLAEQLFRKEFNPYLKKWYRIIGLS
GKAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPQILGLTASPGVGAAKKQSEAEKHIL
NICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLEIMASIQTYC
QKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEALQINDTIRMIDAY
SHLETFYTDEKEKKFAVLNDSDKSDDEASSCNDQLKGDVKKSLKLDETDEFLMNLFFD
N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="unnamed protein product; putative similar to MELANOMA DIFFERENTIATION ASSO [Homo sapiens] (SPTR|Q9H3G6, evidence: E67.6%length, match=2079)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /dev_stage="0
283._.>2331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="thymus"
/clone_lib="RIKEN full-length enriched
/dev_stage="0 day neonate"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="A430105A06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            db_xref="FANTOM_DB:A430105A06"/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 1367.4;
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   details
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Leng
                                                                                                                                        CTCCTTCAGCCCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  th 2331;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OCIATED PROTEIN-5 PASTY, 75.6%ID,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCAGGCTGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGATGTCGAATGG
AGAAGGGACTATT
                                           AGGAGGAACTGTT
                                                                                                                                                                                                                                                                                                                                                                                      AACTGCTGCTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAGGGTGAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGAAACCAAAGA
                                                                                                                                                                                          CTGATCTGCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGAGGTGAAGGA
                                                                                                                                                                                                                                                                                       TGGAGGCCCTAGA
                                                                                                                                                                                                                                                                                                                                       TGGAGGCCCTCCG 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                           599
                                                                                                                                                                                                                                                                                       533
                                                                                                                                                                                                                                                                                                                                                                                                                                        359
713
                                                                                                                                        539
                                                                                                                                                                                          593
                                                                                                                                                                                                                                      479
                                                                                                                                                                                                                                                                                                                                                                                      473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      239
                                                                                             653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
••
```

```
1494
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1074
                                                                                                                                                1614
                                                                                                                                                                              1497
                                                                                                                                                                                                          1554
                                                                                                                                                                                                                                         1437
                                                                                                                                                                                                                                                                                                 1377
                                                                                                                                                                                                                                                                                                                                 1434
                                                                                                                                                                                                                                                                                                                                                              1317
                                                                                                                                                                                                                                                                                                                                                                                            1374
                                                                                                                                                                                                                                                                                                                                                                                                                          1257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1014
                                                                                      1674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGGCATGGAGAATAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACAGTCGAAGACAGAAATCGGATTTCTGCTGCAGGAAACAGCGGGAATGAGTCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGT
                                                     GCAGAAGTTGAAAAACAATAGACTCAAGAAAAGAAAACCAGTGATTCCCCCTTCCTCA
                                                                                                                                                                                                                             CTTGGAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTTCCCTCATTATCATTGA
                                                                                                                                                                                                                                                                                                                                                  ATGGTATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATTTCCAGAAGT
                                                                                                                                                                                                                                                                                                                                                                                           CAATAAGGTAATGTTAGCAGAACAACTTTTCCGAAAAGAGTTCAACCCATATTTGAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                              CAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTTTTGAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTATAGTTCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCAGAACTGCAGCTCAGGCCTTACCAAATGGAAGTGGCCCAACCAGCTCTAGATGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGCACCATGGGAAGTGATTCAGATGAA---GAGAATGTGGCAGCAAGAGCATCCCCCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGAAGTGTCAGCTTCGATGAAAGTCTTGGACATAACAGCAACATGGGCAGGGATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATGGGCAGTGATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCAGAGGCTTCTTGTACAGATTCGTCTGTGACCACAGAATCAGACACAAGTTTGGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTGCCTGCTGTCGATGAGTCAAGTCTGGAGACAGAGGCCTGGAACGTAGACGACATATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGACAACACAGACTTGGCTAACTCGTCTCACAGAGATGGGCCTGCAGCTAATGAGTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGAAGAGCAACT
                                                                                                                                                                                                                                                                                       TGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCCCTCTTAAA
AGAACACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACTGTTAAAGA
                                                                                                                                                                TGAATGTCATCACCAACAAAGAAGCAGTGTATAATAACATCATGAGGCATTATTTGAT
                                                                                                                                                                                                             TGTCAAATCTTACGATGTTATTATCAGCACTGCTCAAATCCTTGAAAACTCCCTCTTAAA
                                                                                                                                                                                                                                                                                                                                    ATGGTATCGAATTATTGGATTAAGTGGCGATACCCAGCTGAAAATATCATTTCCAGAAGT
                                                                                                                                                  TGAGTGCCATCACACCAACAAGGAGGCAGTCTATAACAACATCATGAGACGATATTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TĠĠĠĀĀĠTĠĀTTĊĀĠĀTĠĀĀĀGTĠTCĀTCCĀĞĀĊĀĀĀĀĀĠĀĠŦĀTĊĊĊĊĠĀ
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGACAAGAAGAAGCAGCATCTGAATCCGGGAAGGTTATCGTTCTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1193
                                                                                                                                                                                                                                                                                                                                                                                                                           1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1073
                                                                                                                   1616
                                                                                                                                                                                                                                          1496
                                                                                                                                                                                                                                                                         1553
                                                                                                                                                                                                                                                                                                     1436
                                                                                                                                                                                                                                                                                                                                     1493
                                                                                                                                                                                                                                                                                                                                                                 1376
                                                                                                                                                                                                                                                                                                                                                                                             1433
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   773
                                                          1676
                                                                                        1733
                                                                                                                                                   1673
                                                                                                                                                                                                              1613
                             1793
```

8

중 음

& B 8

멍

음 성 음 성

유

유

음 성

음 성 음 성

음 성 음 정

음 성 음 성

음 중

음 성

음 중

g

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                        RESULT 5
BQ233683
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                     FEATURES
                                                                                                                                                                                              COMMENT
                                               Hominidae, Homo.

B 1 (bases 1 to 1013)

S NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

L Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM12875 row: g column: 07

High quality sequence stop: 721.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2097
                                                                                                                                                                                                                                                                                                                          BQ233683 1013 b
AGENCOURT 7258428 NIH_MGC_71 H
5', mRNA Bequence.
BQ233683
BQ233683.1 GI:20415083
EST.
                                                                                                                                                                                                                                                                       Homo sapiens
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAATCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAACATATTTTAAATATATGTGCCAATCTTGATGCCTTTACCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TACTCATCTTGAAACTTTCTATAATGAAGAGAAAAGATAAGAAGTTTGCAGTCATAGAAGA 2096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAACCTTGATCAACTGAAAAAACCAAATACAGGAGCCATGCAAGAAG:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ი-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTGAGGAAGTACAACGAAGCCCTACAAATCAACGACACGATCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTGAGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTACTGCCAAAAAGTCCAATGTCAGATTTTGGAACCCAACATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTAT(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGACAGCGACAAGAGTGATGACGAGGCCAGCAGTTGCAATGACCAA
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                       . .1013
                                                                                                                                                                                                                                                                                                              (human)
                                                                                                                                                                                                                                                                        Chordata; Craniata; Vertebra
Euarchontoglires; Primates;
                                                                                                                                                                                                                                                                                                                                                                              bр
Ното
                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCATGAATT
                                                                                                                                                                                                                                                                                                                                                                               CDNA
                                                                                                                                                                                                                                                                                                                                                                              DNA c
                                                                                                                                                                                                                                                                           catarrhini;
                                                                                                                                                                                                                                                                                                                                                                              r EST 02-MAY-2002
lone IMAGE:5786526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTGTTCTTTGATAA 2330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATGAGGATGATTT 2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACAAGGATTCAAAC 1856
|||| |||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ||||| || |||||
AAAACAGTGAAAGA 1853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTAAGGGCGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SCAAGCATTCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rrigigarigetga 1913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGATTGATGCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NTGATAGATGCGTA 2036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HAGCAGTGGGCCAT 2033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGCCATTGCAGA 1796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTTTTGAAAA 2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACAATGGGCCAT 1916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2153
```

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                            2472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1932
                                                                                                                                                                                                                                                                                                                                                         2292
                                                                                                                                                                                                                                                                                                                                                                                                                         2232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1872
                                                                                                                              721
                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAAAAAACCAAATACAGGAGCCATGCAAGAAGTTTTGCCATTGCAGATGCAACCAGAGAAGA
                   TCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCCAGAGCTGATGAGAG
                                                                               TACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTTATCCGTTATGG
                                                                                                                                               AGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAACCCCATGACACA
                                                                                                                                                                                                                                                           ACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAATGAAAAATTTGCTGAAGTAGG
                                                                                                                                                                                                                                                                               ACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAATGAAAAATTTGCTGAAGTAGG
                                                                                                                                                                                                                                                                                                                         ATTGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTTACAAAAACACG
                                                                                                                                                                                                                                                                                                                                                                                                             AAGGCTGGCTGAAAACCCCAGAATATGAAAATGAAAAAGCTGACCAAATTAAGAAATACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAAACAATAAAATGTTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTGAGGAAGTACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTATTGTCAAATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGA
                                                                                                                              AATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTTACAAAAACACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGGATGAAACAGATAGATTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGATAGTGATGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTCTATAATGAAGAGAAAGATAAGAAGTTTTGCAGTCATAGAAGATGATAGTGATGAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATACTCATCTTGAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGCAAAAGAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTGAGGAAGTACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGGATTCAAACTTATTGTCAAATGAG
                                                                                                                                                                                              AGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAACCCCATGACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATACTCATCTTGAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27.5%;
ilarity 98.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="IMAGE:5786526"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/note="Organ: uterus; Vector: pCMV-SPORT6; Site_Site_2: Sall; Cloned unidirectionally. Primer:
Average insert size 2.1 kb. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 926.4; DB 3;
Pred. No. 8.4e-215;
0; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _1: NotI;
_Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                             2651
                                                                                                                                                                                                                                                                                                                                                       2351
                                                                                             2591
                                                                                                                                                            2531
                                                                                                                                                                                                                                                                                           2411
                                                                                                                                                                                                                                                                                                                                                                                                                           2291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1811
899
                                                               840
                                                                                                                              780
                                                                                                                                                                                              720
                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2051
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1871
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ū
```

5

밁

밁 Ś 밁 Ś 밁 5 В Ś В 5 В Ś В ঠ 밁 5 В 5 망 ঠ ঠ

멍

밁 ঠ B Ş 뭐 ঠ

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 6
BU902097
LOCUS
DEFINITION
                                                                                                                                                                                                                                     Ş
                                                                                   밁
                                                                                                                               Ş
                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                     ફ
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity Matches 1049; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hominidae; Homo.

18 1 (bases 1 to 1174)

18 NIH-MGC http://mgc.nci.nih.gov/.

19 National Institutes of Health, Mammalian Gene Collection (MGC)

10 Unpublished (1999)

11 Contact: Robert Strausberg, Ph.D.

12 Email: cgapbs-r@mail.nih.gov

13 Tissue Procurement: ATCC

15 CDNA Library Preparation: Life Technologies, Inc.

16 CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

17 DNA Sequencing by: Agencourt Bioscience Corporation

18 Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

17 http://image.llnl.gov

17 Plate: LLAM14059 row: f column: 06

17 High quality sequence stop: 808.

17 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2652
                                   241
                                                                                                                                           181
                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                       115
                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BU902097 1174 k
AGENCOURT 10127740 NIH MGC_71
5', mRNA sequence.
BU902097
BU902097.1 GI:24084010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                         GCGCGCCGGCCTGAGAGCCCTGTGGACAACCTCGTCATTGTCAGGCACAGAGCGGTAGAC 60
  TACATCCAGGTGGAGCCTGTGCTGGACCTACCTGACCTTTCTGCCTG
                                                                                     TATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCCAGGGTGAAAATG
                                                                                                                                                                                                                                                                                                   TTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAAAT 2757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTTCCGAGA-AAGATGATGTAT-AAGCTATACATGGGGTTCAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26.8%;
ilarity 93.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /mol type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6502757"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/note="Organ: uterus; Vector: pCMV-SPORT6;
Site_2: Sall; Cloned unidirectionally. Property of the prop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chordata; Craniata; Vertebra
Euarchontoglires; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 900.4; DB Pred. No. 2e-208; Mismatches 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bp
1 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linea:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1174;
CAGAGGTGAAGGAG
                                                                                                                                                                                               AGATGTCGAATGGG 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T6; Site_1: NotI;
Primer: Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 17-OCT-2002 clone IMAGE: 6502757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15; Gaps
                                     300
                                                                                       294
                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
```

뮍 र्

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                            RESULT 7
BM467983
LOCUS
DEFINITION
 REFERENCE
                                                                                                                                                                                                                                                                                                                                                   1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              595
                                                                                                                                                                                                                                                                                                                                                                                956
                                                                                                                                                                                                                                                                                                                                                                                                           955
                                                                                                                                                                                                                                                                                                                                                                                                                                         897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          295
Eukaryota; Metazoa; (
Mammalia; Eutheria; E
Hominidae; Homo.
1 (bases 1 to 1115)
                                                      5', mRNA seque
BM467983
BM467983.1 GI
EST.
Homo sapiens (
                                                                                                                            1115
AGENCOURT_6437921 NIH_MGC_71
5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C-AGAAGGAAGTGTCAGCTGCTT-AGATGAAAGTCTT-GGACATAACAGCAACATGGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTTCAGCCCACT
                                                                                                                                                                                                                                                                                                           GTGATTCAGGCACCATGGG---AAGTGATTCAGATGAAGAGAATGTGGCAGCAAGAGCA-
                                                                                                                                                                                                                                                                                                                                                                                                                         CTCATC-AGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACAAGTTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTTTCAACCACA-GTTCAGCCAAATCTGG-AGAAGGAGGTCTGGGGCATGG-AGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTGGGAAAAAGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGT-GGAAGAGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGATTGCTCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAATCAGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAGCTGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAACCGGCAGCCCTCTGGCCCGCCCGCTACATGAACCCCTGAGCTCACGGACTTGCCCCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTTGGAGAAGGGAGTCTGGCACCTTGGTTGGACTCGGGAATTCGTGGAGGCCCTCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCATCAAAAATCATCTTTTGCAGATCCTTCTGAAGTTCCAGAACCAAAACAAGTTTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTTTCAACCACAGGTTCAGCCAAATCTGGAAAAAGGAGGTCTGGGGCATGGAAAAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>AGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGACTTGCCCCTCT</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAACTGTTG
                                                                                                   GI:18517025
                                                                      (human)
                           Chordata; Craniata; Vertebra
Euarchontoglires; Primates;
                                                                                                                                              bp
Homo
                                                                                                                                             sapiens
                                                                                                                                                             mRNA
                             Vertebrata; Euteleostomi; rimates; Catarrhini;
                                                                                                                                                CDNA
                                                                                                                                              linear F
                                                                                                                                                                                                                                                                 1105
                                                                                                                                                EST 05-FEB-2002
MAGE:5532884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           354
                                                                                                                                                                                                                                                                                                                          1068
                                                                                                                                                                                                                                                                                                                                                      1074
                                                                                                                                                                                                                                                                                                                                                                                                              1014
                                                                                                                                                                                                                                                                                                                                                                                                                                         955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      954
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                 Ş
                                                                                   밁
                                                                                                               S
                                                                                                                                              밁
                                                                                                                                                                   5
                                                                                                                                                                                                     B
                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                          유
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM12216 row: n column: 21

High quality sequence stop: 690.

location/Qualifiers
                                                                                                                    3035
                                                                                                                                                                            2975
                                                                                                                                                                                                                                      2915
                                                                                                                                                                                                                                                                                             2855
                                                                                                                                                                                                                                                                                                                                                                                                               2735
                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                         362
                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     808;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h 24.0%;
Similarity 99.6%;
08; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGATATTAAAGAATGTAACATTGTTATCCGTTATGGTCTCGTCAC
                                                 GCTTAGATTTTGCCTTGTCTCAAAATAAGGAATTTTTGT
                                                                                       TAAATGGTGAAATCATCTGCAAATGTGGCCAGGCTTGGGGAACAAT
                                                                                                       TAAATGGTGAAATCATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAG 3094
                                                                                                                                                                  AGGAACTTTACATTGTAAGAGAAAACAAAGCACTGCAAAAGAAGTGTGCCGACTATCAAA 3034
                                                                                                                                                                                                                        CTGGGGAAGATATCCATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCA 2974
                                                                                                                                                                                                                                                                                  ACAAGAATAACCCATCACTAATAACTTTCCTTTGCAAAAAACTGCAGGGGGGGCTAGCCTGTT 2914
                                                                                                                                                                                                                                                                                                                           TACAGATGCAAAGTATAATGGAAAAGAAAATGAAAACCAAGAGAAA
                                                                                                                                                                                                                                                                                                                                          TACAGATGCAAAGTATAATGGAAAAGAAAATGAAAACCAAGAGAAATATTTGCCAAGCATT 2854
                                                                                                                                                                                                                                                                                                                                                                                  AAGCTATACATTGTGTTCAAAATATGAAACCAGAGGAGTATGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                   AAGCTATACATTGTGTTCAAAATATGAAAACCAGAGGAGTATGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGGTTCAGGAGTTATCGAACGTGAGACAGTTAATGATTTCCGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGTTCAGGAGTTATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATA 2734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGTCCAGGCCCGTGGTCGAGCCAGAGCTGATGAGAGCACCTACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGGTCCAGGCCCGTGGTCGAGCCCAGAGCTGATGAGAGCACCTACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGGATATTAAAGAATGTAACATTGTTATCCGTTATGGTCTCGTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5532884"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/note="Organ: uterus; Vector: pCMV-SPORT6;
Site_2: Sall; Cloned unidirectionally. Pr
Average insert size 2.1 kb. "
                                                                                                                                                 CATTGTAAGAGAAAACAAAACACTGCAAAAGAAGTG
                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 806.8; DB 3;
Pred. No. 1.5e-185;
); Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1115;
                                                 GATGGTGCACAAAG 541
                                                                                                                                                  TGCCGACTATCAAA 481
                                                                                                                                                                                                                                                                                                                             TATTGCCAAGCATT
                                                                                                                                                                                                                                                                                                                                                                                                      TAAGATTTTGGAAT 2794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTGGTTGCTCACA 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTGGTTGCTCACA 2674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAATGAAATAGCCA 2614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          T6; Site_1: NotI; Primer: Oligo dT.
      CAATCTTGACTATT 3214
                                  CAAAATAATTCAA 601
                                                                                                                                                                                                                                                                    rerectaectert 361
                                                                                                                                                                                                                                                                                                                                                                                     TAAGATTTTGGAAT 241
                                                                                                                                                                                                                                                                                                                                                                                                                                             GAAGATGATGTATA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAATGAAATAGCCA 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Gaps
                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

ঠ

밁 δ В S g Ś g δ 멍 ঠ В Ś 밁 ঠ 밁 5 밁 S 밁 \$ Вb र् 밁 S

र् 밁 Ş 멍 S 맑

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
BQ960157
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                        Query Ma
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                          Hominidae, Homo.

E 1 (bases 1 to 870)

S NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (M Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution information can found through the I.M.A.G.B. Consortium/LLNL at: http://image.llnl.gov

Plate: LLAM14005 row: o column: 17

High quality sequence stop: 738.

Location/Qualifiers

1. 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3215
                             2060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        662
                                                                                                                                                                          851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BQ960157 870 bp
AGENCOURT 8949486 NIH MGC 71 Homo
5', mRNA sequence.
BQ960157
BQ960157.1 GI:22375635
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACAAATTAATGACACAATTCGAATGATAGATGCGTATACTCATCTTGAAACTTTCTATA
                                                                                                                                 AAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTGAGGAAGTACAATGAGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGAAGGAAATCGCAAAGAACGTGTTTGTGCAGAA-ATTTGAGGAAGTACAATGAGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAAGAATCAATAAAATGATTGTTTTACTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAAGAATCAATAAAATGATTGTTTTACTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATCAGTTNAACATTTAATATGATTATGATTAATGTATTCATTATGCTACAGAACTGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATCAGTTAAACATTTAATATGATTATGATTAATGTATTCATTATGCTACAGAACTGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGATAGTGATGAGGGTGGTGATG
                  ATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGATAGTGATGATGAGGGTGGTGATG
                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                             /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6472264"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/clone_lib="NIH_MGC_71"
/site_2: SalI; Cloned unidirectionally. Primer: Oligo Average insert size 2.1 kb. "
                                                                                                                                                                                     23.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                         <u>,</u>
                                                                                                                                                                     Score 801.8; DB 5; Pred. No. 2.3e-184; D; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear I
                                                                                                                                                                                                  Length
                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Collection
                                                                                                                                                                                                     870;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 21-AUG-2002
MAGE:6472264
                                                                                                                                                                         <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       can
                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (MGC)
                                                                                                                                                                                                                                                               NotI;
igo dT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                             2119
                                                           119
                                                                                     2059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                 59
                                                                                                                                                                        4
                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                        RESULT 9
BU189982
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                            뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                             DEFINITION
                                                                         COMMENT
                                                                                                                                                                                                                                                                                             Snoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2180
                                                                                                                                                                                                                                                                                                                                                                                                                                                         2719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                  Hominidae; Homo.

1 (bases 1 to 918)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, M.

Unpublished (1999)
                                                                                                                                                                                                                                                918
AGENCOURT_7950921 NIH_MGC_71
5', mRNA sequence.
BU189982
                                           Contact: Robert Strausberg, |
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                   BU189982.1 GI:22703966
cDNA Library Preparation: Life Technologies, InccDNA Library Arrayed by: The I.M.A.G.E. Consort: DNA Sequencing by: Agencourt Bioscience Corporal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGAAAACCCAGAATATGAAAATGAAAAGCTGACCAAATTAAGAAATACCATAATGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGAGTATTGTGATGGTGATGAAGATGAGGATGATTTAAAGAAACC:
                                                                                                                                                                                                                                                                                                                                                                    GCTCATAAGATTNTGGGAATTNACA
                                                                                                                                                                                                                                                                                                                                                                                                                             GAGAAGATGATATAAAGCTATACATTGTGTTCAAAATATGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATG-AAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGGTTGCTCACAGT-GGTTCAGGAGTTATCGAACATGAGACAGTTAATGATTTCCGA 2718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATATGCGCTTTCCCAGTGGATTACTGAAAATGAAAAATTTGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAACAGATAGATTTCTCATGACTTTATTTTTTGAAAACAATAAAATGTTGAAAAAGGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGAGTATTGTGATGGTGATGAAGATGAGGATGATTTAAAGAAACCTTTGAAACTGGATG
                                                                                                                                                                                                                                                                                                                                                                                                GCTCATAAGATTTTGGAATTACAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTTATCCG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTTACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATATACTAGGACTGAGGAATCAGCACGAGGAATAATCTTTACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGAAAACCCAGAATATGAAAATGAAAAGCTGACCAAATTAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAACAGATAGATTTCTCATGACTTTATTTTTTGAAAAACAATAAAAT(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGAGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGAGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATATGCGCTTTCCCAGTGGATTACTGAAAATGAAAAATTTGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTCACAGTGGGTTCAGGAGTTATCGAACGTGAGACAGTTAATGATTTCCGA 779
                                                                                                                                                          Chordata; Craniata; Vertebra
Euarchontoglires; Primates;
                                                                       Ph.D.
                                                                                                                                                                                                                                                                                                                                                                    864
                                                                                                                                                                                                                                                                                                                                                                                                2800
                                                                                                                                                                                                                                                                              bp
Homo
                                                                                                     Mammalian
                                                                                                                                                                                                                                                                             mRNA
sapiens
                                                                                                                                                                                                                                                                             linear
                                                                                                     င္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAACACGACAGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTATGGTCTCGTCA 2599
     tion
                                                                                                    llection (MGC)
                                                                                                                                                           ta; Euteleostomi;
Catarrhini;
                                                                                                                                                                                                                                                                               r EST 04-SEP-2002
lone IMAGE:6173848
                                                                                                                                                                                                                                                                                                                                                                                                                               CCAGAGGAGTATGG 839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGAGAGCACCTACG 2659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATCGCTACCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TACCATAATGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTAGGAGTCAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGAAACTGGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \GTAGGAGTCAAAG 2419
|||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGAGGAGTAT-- 2775
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGAAAAGGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2179
```

Ś

밁 S

밁

ঠ

밁

```
S
                                                                                                          밁
                                                                                                                                      S
                                                                                                                                                                      밁
                                                                                                                                                                                               S
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 814; Consern
                                                                                                                                                                                                                                                                                                                      1665
                                                                                                                                        1845
                                                                                                                                                                                                                                                            1725
                                                                                                                                                                                                                                                                                                                                                                                  1605
                                                                                                                                                                                                                                                                                                                                                                                                                                             1545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1365
                                                                                                                                                                                                  1785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1485
                                                                                                                                                                      541
                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         found through the I.M.A.G.E. Consc
http://image.llnl.gov
Plate: LLAM13546 row: a column:
High quality sequence stop: 556.
Location/Qualifiers
1. .918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATAGTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACC
TG-TTTGTGCAGAACATTTGAGGAAGTACAATG-AGGCCCTACAAATT-AATGACACAAT
                                                                                                            AAGGATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACCCCAACCCTATGA 1904
                                                                                                                                                                                      TGCCATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGAC
                                                                                                                                                                                                                                                 AACTGTTAAAGAAAACCTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTT
                                                                                                                                                                                                                                                                                                          AGCCAAAGCTGAAGAACACATTTTAAAAACTATGTGCCAATCTTGATGCATTTACTATTAA
                                                                                                                                                                                                                                                                                                                                                    TCCCCTTCCTCAGATACTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                              CATTATCATTGATGAATGTCATCACACCAACAAAGAAGCAGTGTATAATAACATCATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATTATCATTGATGAATGTCATCACACCAACAAGAAGCAGTGTATAATAACATCATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCCTCTTAAACTTGGAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTTCCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTTCCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTTTTGAAGAAATGGTATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTTTTGAAGAAATGGTATCGTGATATTGGATTAAGTGGTGATACCCAACTGAAAATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATAGTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACC
                                                                            ACAATGGG-CCATTCAAATGGAAAAAAAA--GCTGCAAAAAAAGGAAATCGCAAAGAACG
                                                                                                                                                                                                                                                                                          AGCCAAAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAA
                                                                                                                                                                                                                                                                                                                                                                                                                TGCCATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGAC
                                                                                                                                                                                                                                  <u>AACTGTTAAAGAAAACCTTGATCAACTGAAAAAACCAAATACAGGAGCCATGCAAGAAGTT</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    distribution: MGC clone distribution information through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Site_2:
Average
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6173848"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/clone_lib="NIH_MGC_71"
/site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Site_2: SalI; Cloned unidirectionally.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 728.2; DB 5;
Pred. No. 2.2e-166;
); Mismatches 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        þe
                                                                                                                                                                                                                                                            1784
                                                                                                                                                                                                                                                                                                                         1724
                                                                                                                                                                                                                                                                                                                                                                                   1664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1424
                                                                                                                                                                                                                                                                                                                                                                                                                                               1604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1364
                                                                                                                                                                                                    1844
                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                              1961
                                                                                                                                                                        600
```

Ś

GTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTA 2689

TGTNTCAGGAGTAN 696

GTCGAGCCAGAGCTGATGAGAGCACCTACGTCCT

밁

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
BQ772836/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
Query Match
Best Local S
Matches 731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hominidae; Homo.

1 (bases 1 to 755)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Pro
Tumor Gene Index
Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: James Martin
cDNA Library preparation: Dr. M. Bento Soares, Univ
cDNA Library Arrayed by: Dr. M. Bento Soares, Unive
DNA Sequencing by: Dr. M. Bento Soares, Unive
Clone Distribution: Clone distribution information
from Dr. M. Bento Soares, bento-soares@uiowa.edu
Seq primer: M13 FORWARD
POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BQ772836 755 bp mRNA linea: UI-H-FE0-bbn-c-04-0-UI.s1 NCI CGAP FE0 Homo sapiouI-H-FE0-bbn-c-04-0-UI 3', mRNA sequence. BQ772836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
Eukaryota; Me
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebra
Mammalia; Eutheria; Euarchontoglires; Primates; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BQ772836.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCGAAT-GATAGATGCGTATACTCATC-TTGAAACTTTCTATAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTTTTGTGCAAAACATTTGAGGAAGTACAATGAAGGCCCTACAAA
                                                                                                                                              /tissue_type="Chondrosarcoma Cell line"
/tissue_type="Chondrosarcoma Cell line"
/dev_stage="Adult"
/lab_host="DH10B (Life Technologies)"
/clone_lib="NCI CGAP_FEO"
/clone_lib=
  21.4%;
llarity 99.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           clone="UI-H-FE0-bbn-c-04-0-UI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:21981312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (human)
    Score 718.8;
Pred. No. 4.3e
0; Mismatches
                                    .3e-164;
                                                                        踞
                                                                     5
         Indel
                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ith a modified
t I; NCI CGAP FEO is
g tissue(s): a pool
2) The library was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ta; Euteleostomi; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  r EST 26-JUL-2002
ens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ion can be obtained
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               University of Iowa niversity of Iowa ity of Iowa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAGAGAAAG 2071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTAAATGACACAAT 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SAGGAAAAG 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Project (CGAP),
                                                                        755;
       Gaps
         <u>ب</u>
```

```
RESULT 11
BF337464
LOCUS
                                                                                REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                      KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   D
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                      DEFINITION
Hominidae; Homo.

1 (bases 1 to 1035)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collectic
Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: David N. Louis, M.D.

cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.B. Consortium (LI
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3050
                                                                                                                                                                                                                                                                                                                                                                                                                                3290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             215
                                                                                                                                                           Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; C
Mammalia; Eutheria; E
                                                                                                                                                                                                                                                                                                                                                   35
                                                                                                                                                                                                                                                                                                                                                                                                       95
                                                                                                                                                                                                                1035 bp
602035195F1 NCI_CGAP_Brn64 Homo
5', mRNA sequence.
BF337464
BF337464.1 GI:11283715
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGTAATTGAGAAAATGCATCACGTCAATATGACCCCCAGAATTCAAGGAACTTTACATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTAGTGATGAGGATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAGTTAAACATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACTAATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAATGGAAAAGAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTTGGAATTACAGATGCAAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTA
                                                                                                                                                                                                                                                                                                                                                                    TGATTGTTTTACTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                       TAATATGATTATGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATCAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACTAATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAATGGAAAAGAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>AAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTAT</u>
                                                                                                                                                                                                                                                                                                                                                                           3365
                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                           Chordata; Craniata; Vertebrata; Euarchontoglires; Primates; Cata
                                                                                                                                                                                                                                                                   mRNA
sapiens
                                                                                                                                                                                                                                                                    linear EST 22-NOV-2000 cDNA clone IMAGE:4183126
     information can
                                                                                                            Collection
                                                                                                                                                            nta; Euteleostomi;
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2809
                                                                                                                                                                                                                                                                                                                                                                                                                                                           96
                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                      밁
                                                  5
                                                                                                    Ş
                                                                                                                            g
                                                                                                                                                        δ
                                                                                                                                                                                      멍
                                                                                                                                                                                                          5
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                   Б
                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match

Best Local Similarity

Matches 756; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1049
                                                                                                                                                                                                                                                                                                                        1409
                                                                                                                                                                                                                                                                                                                                                                             1349
                                                                                                                                                                                                                                                                                                                                                                                                                                1289
                                                                                                                                                                                                                                                                      1469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1169
                                                                                                            1649
                                                                                                                                                               1589
                                                                                                                                                                                                                   1529
                                                                                                                                     544
                                                                                                                                                                                       484
                                                                                                                                                                                                                                            424
                                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                   304
                                                                                                                                                                                                                                                                                                                                                                                                         244
                                                                                                                                                                                                                                                                                                                                                                                                                                                           184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Conshttp://image.llnl.gov
Plate: LLAM9498 row: n column:
High quality sequence start: 5
High quality sequence stop: 695.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAAAACCAGAGTGGCTGTTTACATTGCCAAGGATCACTTAGACAA(
                                                                                                                                                                                                                                                                                                                                                                     CCCAACTGAAAATATCATTTCCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTACAG 1408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGTTGCCCAGCCAGCCTTGGAAGGGAAGAATATCATCATCTGCCT(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAATGTGGCAGCAAGAGCATCCCCGGAGCCAGAACTCCAGCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGAATGTGGCAGCAAGAGCATCCCCGGAGCCAGAACTCCAGCTCAGGCCTTACCAAATGG 1108
     AGCCATGCAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCC
                                                                                               GAGGGGCCACGAAGCAAGCCAAAGCTGAAGAACACATTTTAAAACTI
                                                                                                                                                   AAAACAAACCAGTGATTCCCCCTTCCTCAGATACTGGGACTAACAGCT
                                                                                                                                                                                                                                                           TGTCAGACTTTTCCCTCATTATCATTGATGAATGTCATCACCAA
                                                                                                                                                                                                                                                                                                                                                                                                         GCAAGGAGTTCCAACCATTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                             GCAAGGAGTTCCAACCATTTTTGAAGAAATGGTATCGTGTTATTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGAGCCTGGAAAAGTTATAGTTCTTGTCAATAAGGTACTGCTAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAAAACCAGAGTGGCTGTTTACATTGCCAAGGATCACTTAGACAA
                                                                                                                                      AAAACAAACCAGTGATTCCCCCTTCCTCAGATACTGGGACTAACAGC
                                                                                                                                                                                         ATAATAACATCATGAGGCATTATTTGATGCAGAAGTTGAAAAACAA
                                                                                                                                                                                                        ATAATAACATCATGAGGCATTATTTGATGCAGAAGTTGAAAAACAA'
                                                                                                                                                                                                                                            TGTCAGACTTTTCCCTCATTATCATTGATGAATGTCATCACACCAA
                                                                                                                                                                                                                                                                                                                   CTCAAATCCTTGAAAACTCCCTCTTAAACTTGGAAAATGGAGAAGA'
                                                                                                                                                                                                                                                                                                                                                     CCCAACI
                                                       ATGCATTTACTATTAAAACTGTTAAAGAAAACCTTGATCAACTGAA
                                                                                                                                                                                                                                                                                                  CTCAAATCCTTGAAAACTCCCTCTTAAACTTGGAAAATGGAGAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21.1%;
ilarity 97.2%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /tissue_type="glioblastoma with EGFR amplification"
/lab_host="DH10B (T1 phage-resistant)"
/clone_lib="NCI_CGAP_Brn64"
/note="Organ: brain; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.57 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP_Library."
                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1. .1035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       clone="IMAGE:4183126"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 711.6;
Pred. No. 2.6e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Consortium/LLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5; DB 2;
2.6e-162;
nes 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amplification"
                                NAACCAAATACAGA 722
                                                                                                                                                                                                                                               CAAAGAAGCAGTGT
                                                                                                                                                                                                                                                                                                                                                     TATTATCAGTACAG
                                                                                                                                                                                                                                                                                                                                                                                                          ATTAAGTGGTGATA 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGAAAAAGCAT 1228
|||||||||||||||
GAAGAAAAAAGCAT 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3CCTTACCAAATGG
       ATTTAAAGAGAA 1826
                                                          AAACCAAATACAGG 1768
                                                                                                                                                                                                          TGAACAGCTCTTCC
                                                                                                           ATGTGCCAATCTTG 1708
                                                                                                                                                                TCACCIGGIGITG
                                                                                                                                                                                                                                                                                                                GCTGGTGTTCAAT 1468
                                                                                     TGTGCCAATC-TG
                                                                                                                                                                                                                                                                 CAAAGAAGCAGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                             NTTAAGTGGTGATA 1348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAACAGCTCTTCC 1288
                                                                                                                                                                                           'AGACTCAAGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTACAGGGAGTG 1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1035;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₩
-:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                 1648
                                                                                     662
                                                                                                                                                                                           543
                                                                                                                                                                                                                                              483
                                                                                                                                                                                                                                                                       1528
                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                                                                                                                                                                                                      363
                                                                                                                                                                                                                                                                                                                                                                                                                                                              243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63
                                                                                                                                        603
```

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
BF983236
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL COMMENT
                                                                                                               Ś
                                                                                                                                               멍
                                                                                                                                                                         8
                                                                                                                                                                                                        B
                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                    ঠ
                                                                                       밁
                                                                                                                                                                                                                                                                                              ફ
Ś
                             뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 723; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov

Plate: LLAM10097 row: a column: 20

High quality sequence stop: 665.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          723
                                                                                                                                                121
                                                                                                                                                                              706
                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                     μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA sequence.
BF983236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BF983236
602305873F1 NIH_MGC_88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hominidae; Homo.
1 (bases 1 to 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BF983236.1
EST.
                                                                                                                                                                                                                                                                    GAGGAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGCCATGCGAGAAG-TTGGCGCTGCGGATGCGACC-GAGAAGATCCCTTTAAGGGAAA
                                                                                                       TCTGATTGCTCAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAA
                                                                                                                                                                GCATTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGC
                                                                                                                                                                                                                            GAGGAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGA
  ATGGAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGAC
                                                         GTGGAAGAGCAACTTCTTTCAACCACAGTTCAGCCAAATCTGGAGAAGGAGGTCTGGGGC
                                                                                                                                                GCATTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGC
                                                                                                                                                                                                          TCTGATTGCTCAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAA
                                                                                                                                                                                                                                                                                                                             20.4%;
llarity 98.9%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4397083"
/tissue_type="duodenal adenocarcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_88"
/note="Organ: small intestine; Vector: pCMV-SPORT6;
Site_1: NotI; Site_2: SalI; Cloned unidirectionally;
oligo-dT primed. Average insert size 1.767 kb. Library
enriched for full-length clones and constructed by Life
Technologies. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:12386048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     729)
                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                             Score 687; DB 2; I
Pred. No. 2.5e-156;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
B CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear EST 23-JAN-2001 clone IMAGE:4397083 5',
                                                                                                                                                                                                                                                                                                                                                       Length 729;
                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                              <u>د،</u>
                                                                                                                                                                                                                                                                                                                               Gaps
                                                           885
                                                                                         240
                                                                                                                       825
                                                                                                                                                                               765
                                                                                                                                                                                                                                        705
                                                                                                                                                  180
                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                               'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 13
DR422160
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTTTGGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAAGT
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vert.
Mammalia; Eutheria; Euarchontoglires; Primat.
Hominidae; Homo.
1 (bases 1 to 690)
Wistow,G., Jaworski,C., Aryankalayil-John,M.
Reid,T., Dushku,N. and Carper, D.
NEIBank analysis of Human pterygium
Unpublished (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                   Tel: 301 402 3452
Fax: 301 496 0078
                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Wistow G
Section on Molecular Structure and Function
National Eye Institute
6/331, NIH, Bethesda, MD 20892-2740, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DR422160
nav08g05.yl Human pterygium.
clone nav08g05 5', mRNA seque
                                                                                                                                                                                                                                                                                       Email: graeme@helix.nih.gov
Plate: 08 row: g column: 05
Seq primer: Universal M13 Reverse.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DR422160.1 GI:68324176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCATCCCCGGAGCCAGAACTCCAGCTCAGGCCTTACCAAATGGAAG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAGTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCA 1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTACATTGCCAAGGATCACTTAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTTTACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAAGCATCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGGAAGGGAAGATATCATCATCTG-CTCCCTACAGGGAGTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCATCCCCGGAGCCAGAACTCCAGCTCAGGCCTTACCAAATGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGGCAGTGATTCAGGCACCATGGGAAGTGATTCAGATGAAGAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGGCAGTGATTCAGGCACCATGGGAAGTGATTCAGATGAAGAGAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATAGTTCTTGTGCATAAGGTACTGCTAGTTGAACAGCTCTTCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTGGAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAAACCAGAGTGGCT 1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACAAGTTTGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAAC 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTTTGAAGAA 1316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens (human)
                                                                                                                                                                 / Janism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="nav08g05"
/righty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTG
/clone lib="Human pterygium. Unnormalized (nav)"
/clone lib="Human pterygium. Unnormalized (nav)"
/note="Organ: Eye; Vector: pCMVSport6; RNA was extracted
from 9 pooled human pterygia. A directionally cloned cDNA
library in the pCMVSPORT6 vector (Invitrogen) was
constructed at Bioserve Biotechnology (Laurel MD)
                                                                                                          /tissue_type="Pterygium"
/dev_stage="Adult"
/lab_host="EMDH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata; Craniata; Vertebra
Euarchontoglires; Primates; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bp mRNA
Unnormalized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (nav)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ta; Euteleostomi;
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |||||||||
AGGAGTTCCCACCA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACATAACAGCAAC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCAGAATCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 wвеу, J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAACCAGAGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTGCCCAGCCAG-C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGTGGCAGCAAGA 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGTGGCAGCAAGA 1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \GCCTGGAAAAGTT 1245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCCAGCCAGCC 1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 29-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
```

```
RESULT 14
CA423868/c
 ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 684; Conserv
                                                                                                                                                                                                                                                                                                 2454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1854 AACTTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
CA423868 701 bp mRNA 1
UI-H-FE1-bed-1-21-0-UI.s1 NCI_CGAP_FE1 Homo
UI-H-FE1-bed-1-21-0-UI 3', mRNA sequence.
CA423868
CA423868.1 GI:24786594
EST.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTATACTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACATTTGAGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATAGATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATTCAAATGGAAAAAAAAAGCTGCAAAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGA
                                                                                                                                                                                                                             AATCAATCTGCTTATCGCTACCACAGTGGC
                                                                                                                                                                                                                                                                                  GTTCAAACCCATGACACAGAATGAACAAAAAAGAAGTCATTAGTAAATTTTCGCACTGGAAA
                                                                                                                                                                                                                                                                                                                                                    AAAATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGA
                                                                                                                                                                                                                                                                                                                                                                                                     AATCTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                        AATCTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCCAGTGGATTACTGAAAAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAACAATAAAATGTTGAAAAGGCTGGCTGAAAAACCCAGAATATGAAAAATGAAAAAGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATTCAAATGGAAAAAAGCTGCAAAAAGAAGGAAATCGCAAAGAACGTGTTTGTGCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAACAATAAAATGTTGAAAAGGCTGGCTGAAAACCCCAGAATATGAAAATGAAAAGCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTAAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTAAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTATACTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20.2%;
llarity 99.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        essentially following the protocols of the SuperScript Plasmid System, full details of which are contained in the manufacturer's Instruction manual (http://www.lifetech.com/). First strand synthesis was carried out using a Not I primer-adapter [5'-pGACTAGTTCTAGATCGCGAGCGGCCCCC(T)15-3']. cDNA was cloned in Not I/Sal I sites. EST analysis was performed at the NIH Intramural Sequencing Center (NISC). Analyzed data available through http://neibank.nei.nih.gov."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 680.4; DB:
Pred. No. le-154;
0; Mismatches
                                                                                                                                                                                                                              2543
                                                                                                                                                                                            690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                        07-NOV-2002
                                                                                      clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1973
                                                                                                                                                                                                                                                                                                  2513
                                                                                                                                                                                                                                                                                                                                                                    2453
                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2093
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                   8
                                                                                                                                                                  5
                                                                                                                                                                                                                                         Ş
                         δ
                                                                     멼
                                                                                                                                       멍
                                                                                                                                                                                                            日
                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                              ঠ
```

망 5 밁 Ş 밁 ঠ В ঠ 밁 Ş 밁 გ

S

GAATTCAAGGAAC

402

밁 S 망 8 В Ş 뮸 ঠ В Ś

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 678; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                             2801
                  2921
                                                                                                                                                                                                                                          641
                                                                                                                                                                                                                                                                                                                                701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrat Mammalia; Eutheria; Euarchontoglires; Primates; Chominidae; Homo.

1 (bases 1 to 701)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.

National Cancer Institute, Cancer Genome Anatomy
Tumor Gene Index
Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-r@mail.nih.gov
Tissue Procurement: James Martin
cDNA Library preparation: Dr. M. Bento Soares, U
cDNA Library Arrayed by: Dr. M. Bento Soares, Un
DNA Sequencing by: Dr. M. Bento Soares, Universi
Clone Distribution: Clone distribution informati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seq primer: M13 POLYA=Yes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          from Dr. M.
                                                                                                                                                                                                                                                              TACATTGTGTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGA
                                                                                                                                                                                                                                                                                                                                                   CAGGAGTTATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTA
                                                            TGCAAAGTATAATGGAAAAGAAAATGAAAACCAAGAGAAATATTGCC
AAGATATCCATGTAATTGAGAAAATGCATCACGTCAATATGACCCCA
                                                                                                                                                                                                                                                                                                                                CAGGAGTTATCGAACGTGAGACAGTTAATGATTNCCGAGAGAAGATV
                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /OLYMINES NOW SEPICIAL
/MOLTYPE="MRNA"
/db xref="taxon:9606"
/clone="UI-H-FE1-bed-1-21-0-UI"
/tissue_type="Adult"
/dev_stage="Adult"
/dev_stage="Adult"
/dev_stage="Adult"
/clone lib="NCI CGAP_FE1"
/clone lib="NCI CGAP_FE1"
/note="Organ: Chondrosarcoma; Vector: pT7T3-Pac
(Pharmacia) with a modified polylinker; Site_1: EcoR I;
Site_2: Not I; NCI CGAP_FE1 is a normalized cDNA library
derived from a pool of mRNA obtained from 3 cell lines
from grade II chondrosarcoma tissues. The library was
constructed according to Bonaldo, Lennon and Soares,
Genome Research, 6:791-806, 1996. First strand cDNA
synthesis was primed with an oligo-dT primer containing a
Not I site. Double stranded cDNA was ligated to an EcoR I
adaptor, digested with Not I, and cloned directionally
into pT7T3-Pac vector. The oligonucleotide used to prime
the synthesis of first-strand cDNA contains a library tag
sequence that is located between the Not I site and the
(dT)18 tail. The sequence tag for this library is
CGCTACGGAC. The cell lines were provided by Dr James
Martin from the University of Iowa.
TAG_ISSUE=Human grade 2 chondrosarcoma cell line pool
TAG_LB=UI-H-FE1
TAG_SEQ=CGCTACGGAC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bento Soares, bento-soares@uiowa.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                       19.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FORWARD
                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                    Score 654.4; DB 6;
Pred. No. 2.3e-148;
0; Mismatches 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  University of Iowa
University of Iowa
sity of Iowa
tion can be obtained
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Catarrhini;
                                                                                                                                                                                                                                                                                                                                   GATGTATAAAGCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               à
     GAATTCAAGGAAC
                                                                                                     GCCTGTTCTGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Project (CGAP),
                                                                                                                                                                                               AAGCATTACAAGA
                                                                                                                                                     VAGCATTACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                      w
~.
                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                             2860
                      2980
                                                                 462
                                                                                                          2920
                                                                                                                                                     522
                                                                                                                                                                                                                                                                                       2800
                                                                                                                                                                                                                                             582
                                                                                                                                                                                                                                                                                                                                                                           2740
                                                                                                                                                                                                                                                                                                                                   642
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
BG741146
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                       ORIGIN
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                source
  Match
                                                                                                                                                                                                                                                                                                                                                                               Hominidae; Homo.

3 1 (bases 1 to 827)

3 NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (M. Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: James Cleaver, M.D.

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
 plate: LLAM10630 row: b column: 06

High quality sequence stop: 763.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA sequence.
BG741146
BG741146.1 GI:
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG741146
602631817F1 NCI_CGAP_Skn3 Homo of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGAAATCATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTAAACATTTAATATGATTATGATTAATGTATTCATTATGCTACAGAACTGACATAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGTTTATTTAGTGAGGGGTTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTTGCCTTGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTTGCCTTGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAATAAAATGATTGTTTTACTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCAATAAAATGATTGTTTTACTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTGTTTA-TTAGTGATGAGGATTAGCACTTGATTGAAGATTCTTTTAAAATACTATCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACAATACAAAAGTGGGTAGAATTACCTATCACATT--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACAATACAAAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGAAATCATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                       /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4776869"
/lab_host="DH10B (T1 phage-resistant)"
/clone_lib="NCI_CGAP_Skn3"
/clone_lib="NCI_CGAP_Skn3"
/note="Organ: skin; Vector: pCMV-SPORT6; Site_1: No Site_2: SalI; Cloned unidirectionally. Primer: Olione of the size of the s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:14051799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (human)
    19
  . 48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
    652.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens cDNA
  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA
  BB
  <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAATCTTGACTATTCAGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
A clone
  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 15-MAY-2001
IMAGE:4776869 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    can
                                                                                                             Oligo dT.
by Life
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MGC)
                                                                                                                                                                     NotI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                164
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         45
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ફ
                                        밁
                                                                   र्
                                                                                             밁
                                                                                                               ঠ
                                                                                                                                            g
                                                                                                                                                                  ঠ
                                                                                                                                                                                              В
                                                                                                                                                                                                                  र्
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                       멼
                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 96...
Matches 798; Conservative
                        1195
                                                                        1135
                                                                                                                                                                      1018
                                                                                                                       1077
                                                                                                                                                                                                                                                                     902
                                                719
                                                                                                660
                                                                                                                                              600
                                                                                                                                                                                              540
                                                                                                                                                                                                                      959
                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                     843
                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     426
778
                                                                                                                                                                                                                                                                                                                                                                      783
                                                                                                                                                                                                                                                                                                                                                                                                                       725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Н
                                                                                                                                                                                                                                                                                                                                                                                              GTCAAACAGGAAACAATGAACTTGTCCACGAGTTAACAGGCTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGCAGCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACGGAC
                                                                                                                                                                                                                                                            CAGAATCATCTTTGCA-GATTCTTCTGTAGTTTCAGAATCAGACAC
                                                                                                                                                                                                                                                                                                                                                                   CAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCTACTAAAAAGGATTGTGCAGAAAGAAACTGGTTCTCTGCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAGGAACTGTTGACAA 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTT
                                                                                                GCCAGAACTCCAGCTCAGGCCTTACCAAATGGCACAGTTGCCCCAGC
                                                                                                                                                             TCAGGCACCATGGGAAGTGATTCAGATGAA-GAGAATGTGGGCAGCA
                                                                                                                                                                                                                                                                                                                                                                                                              GTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCTACTAAAAAGGATTGTGCAGAAAGAAAACTGGTTCTCTGCATT'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTCCTT
AGCCACGGATCACT
             -GCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAAG 1243
                                                                      AAGAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAG
                                                                                                           GCCAGAACTCCAGCTCAGGCCTTACCAAATGG--AAGTTGCCCAGCC
                                                                                                                                                TCAGGCACCATGGGAAGTGATTCAGATGAACGAGAATGTGGCAGCA
                                                                                                                                                                                                                AAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGA-CATAACAGCAI
                                                                                                                                                                                                                                                CAGAATCATCTTTTGCACGATT
                                                                                                                                                                                                                                                                                                             TTCAACCACAGTTCAGCCAAATCTGGA-GAAGGAGGTCTGGGGCAT(
                                                                                                                                                                                                                                                                                                                                               CAATGCAGAGTTGAGAATTTATCACAAGTTGATGGTCCTCAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCAGCCCTCTGGCCG-
                                                 AAGACTATCATCATCTG
                                                                                                                                                                                                TGTCAGCTGCTTAGATGAAAGTCTTGGACCATAACAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          96.1%;
                                               - CTCCCTACAGGGAGTGGAAAAACAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCGCTACATGAACCCTGAGCTCACGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. 5.8e-148; ); Mismatches 17;
                                                                                                                                                                                                                                                 CTTCTGTAGTTTCAGAATCAGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indel
                                                                                                                                                                                                                                                                                                                                               GAAGAGCAACTTCT 842
||||||||||||
GAAGAGCAACTTCT 419
                                                                                                                                                                                                                                                                                               GGAGAATAACTCAT 901
||||||||||||
GGAGAATAACTCAT 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGTCCCACTCTGG 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAG-CCCACTCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TIGCCCTCTCCATC 59
  ÁCÁG 827
                                                                                                                                                                                                                                                 CAAGITTGGCACGC 539
                                                               TGGCTGTTTACATT 1194
                                                                                                                                               AGAGCATCCCCGGA 1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCAGGTGTAAGAG 664
                                                   recreatracart 777
                                                                                                                                                                                                 CATGGGCAGTGAT 599
                                                                                                                                                                                                              \CATGGGCAGTGAT 1017
                                                                                                                                                                                                                                                                AAGTTTGGCA--G 958
                                                                                                                                                                                                                                                                                                                                                                                               TTGGCTCAGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                       TG--CTCAGAAAG 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGAATGTTCTTC 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGGTGTAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAACTGTTGACAA 604
                                                                                                  AG-CTTGGCAGGG
                                                                                                             AGCCTTGGAAGGG 1134
                                                                                                 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       544
                                                                                                                                                                                                                                                                                                                                                                                                359
                                                                                                                                                                                                                                                                                                                                                                                                                                                  299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12;
```

March 14, 2006, 02:35:01

Search completed: Job time : 11790 |

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM nucleic
               00000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                     1278.8
376.4
285.4
285.4
179.6
124.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                  seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Issued Patents NA:*
1: /cgn2_6/ptodata/1/ina/1_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/H_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
7: /cgn2_6/ptodata/1/ina/PP_COMB.seq:*
8: /cgn2_6/ptodata/1/ina/RE_COMB.seq:*
9: /cgn2_6/ptodata/1/ina/RE_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-515-363C-1
3365
1 gcgcgccggcctga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March 12, 2006, 05:07:39; Search time 1009 Seconds (without alignments) 5928.142 Million cell up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IDENTITY_NUC Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1303057 seqs, 888780828 residues
                                                                                         gcgcgccggcctgagagccc.....aaaatgattgttttactctg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Copyright
                                                                                                                 000000000
                                                                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                   1392
458
301
301
2590
193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                               US-09-221-268D-12

US-09-799-451-771

US-08-143-576-6

US-09-221-268D-11

US-010-131-827-8333

US-08-232-463-14

US-09-949-016-17284

US-09-949-016-17284

US-09-9590-968B-1

US-09-853-768-3

US-09-853-768-3

US-09-853-768-3

US-09-853-768-3

US-09-853-768-3

US-09-853-768-46

US-09-339-681-46

US-09-339-338-46

US-09-433-826B-46

US-09-834-759-46

US-09-834-759-46

US-09-834-759-46

US-09-590-751A-46

US-09-590-751A-46
                                                                                                                                                                                                                                                                                                                                                                                                              US-09-023-655-48
US-09-907-907A-32
US-08-143-576-7
US-09-221-268D-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.1.7
Biocceleration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2606114
Sequence 48, Appl Sequence 7, Appli Sequence 12, Appli Sequence 12, Appli Sequence 6, Appli Sequence 6, Appli Sequence 11, Appli Sequence 11, Appli Sequence 14, Appli Sequence 17284, A Sequence 10, Appli Sequence 10, Appli Sequence 46, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell updates/sec
```

	იი	O	a
4444 444 442 444 444 444 444 444 444 44	35 36 38	226 229 320 321 332	25
48.2 47.8 47.8 47.8 47.8			54.6
			1.6
2535 7500 2319 2451 4416 5361	8920 8920 142504 142506	1141 1964 1964 1671 612 259 767677 767677	371
ա ա ա ա ա ա ա	ωωωκ	ພ ພ ພ ພ ພ ພ ພ ພ ພ	ω
US-09-799-451-549 US-09-949-016-4957 US-09-958-489-90 US-09-976-594-786 US-09-058-489-17 US-08-973-462-2 US-08-973-462-1	US-08-446-855A-1 US-09-150-741-1 US-09-949-016-13693 US-09-949-016-12474	US-09-806-708B-22 US-09-999-833A-441 US-10-020-445A-441 US-09-248-796A-4970 US-09-902-540-1357 US-09-913-999C-2844 US-09-949-016-12147 US-09-949-016-17361 US-09-949-016-17361 US-09-806-708B-22	US-10-076-622-46
Sequence 549, App Sequence 4957, Ap Sequence 90, Appl Sequence 786, Appl Sequence 17, Appli Sequence 2, Appli Sequence 1, Appli	1, Ap 1, Ap 13693	Sequence 22, Appl Sequence 441, App Sequence 441, App Sequence 4970, Ap Sequence 1357, Ap Sequence 2844, Ap Sequence 12147, A Sequence 17361, A Sequence 22, Appl	Sequence 46, Appl

ALIGNMENTS

```
; Sequence 48, Application; Patent No. 6607879; GENERAL INFORMATION: APPLICANT: Cocks, I APPLICANT: Susan G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 1
US-09-023-655-48
                                                                                                                                    CLASSIFICATION:
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Zeller, Karen J.
REGISTRATION NUMBER: 37,071
REFERENCE/DOCKET NUMBER: PA-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 855-0555
TELEPAX: (650) 845-4166
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6..

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/023,655
FILING DATE: HEREWITH
CLASSIFICATION DATA:
APPLICATION NUMBER:
PRIOR APPLICATION NUMBER:
FILING DATE:
LENGTH: 1392 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: HMC1NOT01
CLONE: 004700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE
ADDRESSEE: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Jeffrey J. Seilhamer TITLE OF INVENTION: COMPOSITION TITLE OF INVENTION: EXPRESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 3174 POI
CITY: PALO ALTO
STATE: CALIFORN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ZIP: 94304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: INCYTE PHARMACEUTICALS, 3174 PORTER DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/09023655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Susan G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Benjamin G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stuart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1508
                                                                                                                                                                                                                                               PA-0001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FOR
                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THE DETECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ဝူ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOOD CELL GENE
```

CAATACAAAAAGT 3175

TGTTTATTTAGTG 3235

rGTTTATTTAGTG 1260

AAACATT--AATA 1318 AAACATTTAATAT 3295 GAAATCATCTGCA 1080 GAAATCATCTGCA 3055

TTGCCTTGTCTCA 3115

1140

```
ş
                                                                                               8
                                                                                                               S
                                                                                                                                            멍
                                                                                                                                                                                             명
                                                                                                                                                                                                             5
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
밁
                                              밁
                                                                   Ş
                                                                                                                                                                र्
                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-023-655-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 1311; Conserv
                                                                      2876
                                                                                                                     2816
                                                                                                                                                                                                                      2696
                                                                                                                                                                                                                                                                      2636
                                                                                                                                                                                                                                                                                                                                                                     2516
                                                                                                                                                                                                                                                                                                                                                                                                                     2456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1976
                                                                                                                                                                                                                                                                                                                    2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                              841
                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
961
                                               901
                                                                                                                                              781
                                                                                                                                                                                              721
                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACAATAAAATGTTGAAAAAGGCTGGCTGAAAACCCCAGAATATGAAAATGAAAAGCTGACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACAATAAAATGTTGAAAAAGCTGGCTGAAAAACCCCAGAATATGAAAAATGAAAAAGCTGACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTGAGAAAATGCATCACG
           TTGAGAAAATGCATCACGTCAATATGACCCCCAGAATTCAAGGAACTTTACATTGTAAGAG
                                                                                                            AAAAGAAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCCATCAACTAA
                                                                                                                                                                                                                                                                                                                                                           TCAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCCAGTGGATTACTGAAAATGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAA
                                                            TAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATCCATGTAA
                                                                                                                                              ATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGG
                                                                                                                                                            ATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGTATAATGG
                                                                                                                                                                                              GTGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAA
                                                                                                                                                                                                             ATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGTGTTCAAA
                                                                                                                                                                                                                                               CCAGA
                                                                                                                                                                                                                                                                                                            TTGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAG
                                                                                                                                                                                                                                                                                                                                                TAAAT
                                                                                                                                                                                                                                                                                                                                                                                                           TCAAACCCATGACACAGAATGAACAAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAAAATGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGAGGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TAAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                              TCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38.0%;
94.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 1278.8; pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                       2515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                       2995
                                              960
                                                                                                                       2875
                                                                                                                                               840
                                                                                                                                                                       2815
                                                                                                                                                                                                                       2755
                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                       2695
                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                      2635
                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                       2575
                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                             US-09-907-907A-32

Sequence 32, Application US/09907907A

Patent No. 6951923

GENERAL INFORMATION:

APPLICANT: Fisher, Paul B.

APPLICANT: Fisher, Paul B.

APPLICANT: Leszcyniecka, Magdalena

TITLE OF INVENTION: TERMINAL CELL DIFFERENTIATION AND USES

FILE REFERENCE: A34584-A-PCT-USA (070050.1664)

CURRENT APPLICATION NUMBER: US/09/907,907A

CURRENT FILING DATE: 2001-07-16

PRIOR APPLICATION NUMBER: US 09/243,277

PRIOR APPLICATION NUMBER: US 09/243,277

PRIOR FILING DATE: 1999-02-02

NUMBER OF SEQ ID NOS: 51

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 32

LENGTH: 458

TYPE: DNA

ORGANISM: Homo sapiens

FEATURE:

NAME/KEY: unsure

LOCATION: 342, 355, 365, 368, 375, 381, 385, 414, 445

COTHER INFORMATION: a or c or g or t

US-09-907-907A-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
US-09-907-907A-32
                                        S
                                                                     В
                                                                                            Ś
                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ద
Ş
                      В
                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                       Query Match
Best Local Sim
Matches 388;
                                                3089
                                                                                                                                                2969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2996
                        121
                                                                       61
                                                                                                                                                                                   Similarity
                                                                                                                       AATTCAAGGAACTTTACATTGTAAGAGAAAACAAAGCACTGCAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATTATGATTAATGTATTCATTATGCTACAGAACTGACATAAGAATC---AATAAAATGA 3352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACAAAGGCTTAGATTTGCCTTGTCTCAAAATAAGGAATTTTGTAGTG
                                                                      ATCAAATAAATGGTGAAATCATCTGCAAATGTGGCCAGGCTTGGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGTAGAATTACCTATCACATTTCCCCAATCTTGACTATTCAGAATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTCAACAAAGAAACAATACAAAAAGTGGGTAGAATTACCTATCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGTTTTACTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTTATGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGAT
                                                                                                                                                                       11.2%;
ilarity 97.7%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGTATTCATTATGCTACAGAACTGACAATNGAGNCTCAATAAAAATGA 1378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3365
                                                                                                                                                                         <u>.</u>
                                                                                                                                                                       Score 376.4; DB 3; Pred. No. 6.6e-91; D; Mismatches 8;
                                                                                                                                                                                              Length
```

DURING CELLULAR SENESCENCE A

ATTTCCCAATCTTG 3208

GTTTTCAAAATA 180

TTTTCAAAAATA 3148

ACAATGATGGTGC 3088

ACAATGATGGTGC 120

AAGTGTGCCGACT 3028

1; Gaps

AAGTGTGCCGACT 60

1 458;

Ş

```
; MOLECULE TYPE:
; HYPOTHETICAL: N
; ANTI-SENSE: NO
US-08-143-576-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                          밁
                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
US-08-143-576-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
멂
                          $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                           NAME: White, John P.
REGISTRATION NUMBER: 28,678
REFERENCE/DOCKET NUMBER: 4356
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 977-9550
TELEFAX: (212) 664-0525
TELEX: 422523 COOP UI
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 301 base pairs
                                                                                                                      Query Match
Best Local Similarity
Matches 297; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 7, Appl Patent No. 56437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, V.

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/143,576

FILING DATE: 25-OCT-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION: APPLICANT: Fisher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: John P. White, c/o Cooper
STREET: 30 Rockefeller Plaza
CITY: New York
STATE: New York
COUNTRY: U.S.A.
ZIP: 10112
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Jiang, FITITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                             TYPE: nucleic STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 25-OCT-1993
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3209
                                                                                         1592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                             nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08143576
                                                                           ACAAACCAGTGATTCCCCCTTCCTCAGATACTGGGACTAACAGCTTCACCTGGTGTTGGAG
                              GGGCCACGAAGCCAAAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGACATAAGAATCAATAAATGATTGTTTTACTCTG 3365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAATACTATCAGTTAAACATTTAATATGATTATGATTAATGTATTCATTATGCTACAGAA 3328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fisher,
                                                                                                                        Conservative
                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                             single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Hongping
N: METHOD
N: CDNA LI
                                                                                                                                     99.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/143,576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D FOR GENERATING LIBRARY AND USES
                                                                                                                                                                                                                                                                                                                                                                                                           43563/JPW/AKC
                                                                                                                      Score 285.4; DB 2;
Pred. No. 1.6e-66;
); Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              & Dunham
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A SUBSTRACTED OF THE GENERA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERATED LIBRARY
                                                                                                                                                  Length 301;
                                                                                                                        Indels
                                                                                                                        ₽~4
~•
                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                             1711
                                                                                          1651
                                                             60
```

RESULT 5 US-09-799-451-771

Sequence 771, Application Patent No. 6783969
GENERAL INFORMATION:

Application

US/09799451

APPLICANT: Tang, Y. APPLICANT: Zhou, P. APPLICANT: Goodrich

APPLICANT: APPLICANT: APPLICANT:

Zhou, FALL Zhou, FALL Goodrich, Ryle Boundi, Vinod Ren, Feiyan Ren, Jie

Ryle

```
; SEQ ID NO 12
; LENGTH: 301
; TYPE: DNA
; ORGANISM: homo sapiens
US-09-221-268D-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 4
US-09-221-268D-12
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                  밁
                                                                                                    Ş
                                                                                                                                        밁
                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
Matches 297; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 12, Applica Patent No. 6720408 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Jiang, Hongping
TITLE OF INVENTION: NUCLEIC ACID MOLECULES
TITLE OF INVENTION: NUCLEIC ACID SEQUENCE
FILE REFERENCE: A34534-A-A (070050.1637)
CURRENT APPLICATION NUMBER: US/09/221, 268D
CURRENT FILING DATE: 1998-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1993-10-27
NUMBER OF SEQ ID NOS: 30
SOFTWARE: FastSEQ for Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 08/316,537
PRIOR FILING DATE: 1994-09-30
PRIOR APPLICATION NUMBER: 08/143,576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Fisher, APPLICANT: Jiang,
                                                                                                                                                                          1712
                                                                                                                                                                                                                                                 1652
                                                                                                                                                                                                                                                                                                          1592 ACAAACCAGTGATTCCCCCTTCCTCAGATACTGGGACTAACAGCTTC
                                                                                                                                         121
                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                               61
                                                                                    CATGCAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTC 1831
                                                                                                                                                                                                                                     GGGCCACGAAGCAAGCCAAAGCTGAAGAACACATTTTAAAACTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAGAAATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCCAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATTTACTATTAAAACTGTTAAAGAAAACCTTGATCAACTGAAAAAA
                               TAGAAATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCCAATC
                                                                    CATGCAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAGAAATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTGGA 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGCAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGCAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCCATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATTTACTATTAAAACTGTTAAAGAAACCTTGATCAACTGAAAAA
                                                                                                                                          CATTTACTATTAAAACTGTTAAAGAAAACCTTGATCAACTGAAAAA
                                                                                                                                                               CATTTACTATTAAAAACTGTTAAAGAAAACCTTGATCAACTGAAAAAA
                                                                                                                                                                                                                GGGCCACGAAGCCAAAGCTGAAGAACACATTTTAAAACTATG
                                                                                                                                                                                                                                                                                     ACAAACCAGTGATTCCCCTTCCTCAGATACTGGGACTAACAGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09221268D
                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Paul B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Windows
                                                                                                                                                                                                                                                                                                                                                                         99.3%;
                                                                                                                                                                                                                                                                                                                                                              <u>,</u>
                                                                                                                                                                                                                                                                                                                                                           Score 285.4; DB 3
Pred. No. 1.6e-66;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WHICH SPECIFICS ENCODING MDA-7
                                                                                                                                                                                                                                                                                                                                                                                            Length 301;
                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCAAATACAGGAGC 1771
||||||||||
|CCAAATACAGGAG- 179
                                                                                                                                                                                                                rGCCTATCTTGATG 120
                                                                                                                                                                                                                                   RGCCAATCTTGATG 1711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ALLY HYBRIDIZE WITH AND PHARMACEUTICAL COMPOSI'S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAGATTTTGGA 1890
                      TCAGATTTTGGA 1890
                                                                    AAAGAGAAACTTC 239
                                                                                                                                          CAAATACAGGAG- 179
                                                                                                                                                               CAAATACAGGAGC 1771
                                                                                                                                                                                                                                                                                       CCTGGTGTTGGAG 60
                                                                                                                                                                                                                                                                                                            CCTGGTGTTGGAG 1651
TCAGATTTTGGA 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAGAGAAACTTC 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAGAGAAACTTC 1831
|||||||||||||||
                                                                                                                                                                                                                                                                                                                                                            1; Gaps
```

```
8
                                                    δ
                                                                                    밁
                                                                                                                 Ś
                                                                                                                                             밁
                                                                                                                                                                       8
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Wehrman, Tom
APPLICANT: Ghosh, Reena
APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 6783969el N.
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 803
CURRENT APPLICATION NUMBER: US/09/7.
CURRENT FILING DATE: 2001-03-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Sim
Matches 999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: pt_FL_genes Version SEQ ID NO 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: HOMO EFEATURE:
NAME/KEY: CDS
LOCATION: (190)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 25
TYPE: DNA
                                                                                                                                                                                                                                    1408
                                                                                                                                                                                                                                                                                             1348
                                                                                                                                                                                                                                                                                                                                                                                                                1228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1108
                                                                                                                                                                                                                                                                                                                                                      1288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1048
                                                                                                                                                                           1468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1168
                                                                                                                                                                                                       499
                                                                                                                                                                                                                                                                 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 47.0
99; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Zhao, Qing A.
Zhao, Qing A.
Wang, Jian-Rui
Ma, Yungin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGACTGCCCTGGGCAGACCTACCTACTAGAGCAGAATGGAGCTTCGGTCCTACCAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGAATGTGGCAGCAAGAGCATCCCCGGAGCCAGAACTCCAGGCCTCAGGCCTTACCAAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGTGATCATGCCTGCCCTGGAGGGCAAGAATATCATCATCTGGCTGCCCACGGGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAGTTGCCCAGCCAGCCTTGGAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (190)..
  GGAGGGGCCACGAAGCCAAAGCCGAAGCAGAACACATTTTAAAACTATGTGCCAATCTT
                                                                                                                                                               TTGTCAGACTTTTCCCTCATTATCATTGATGAATGTCATCACCAACAAAGAAGCAGTG
                                                                                                                                                                                                                                    GCTCAAATCCTTGAAAACTCCCTCTTAAACTTGGAAAATGGAGAAGATGCTGGTGTTCAA
                                                                                                                                                                                                                                                                ATGGGACCACGTGCTGGCTTTGGCCACCTGGCCGGTGCCATGACCTGCTCATCTGCACA
                                                                                                                                                                                                                                                                                            ACCCAACTGAAAATATCATTTCCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTACA
                                                                                                                                                                                                                                                                                                                        GGTGAAGAGTTCAGGCGCATGCTGGATGGACGCTGGACCAACCCTGAGTGGGGAC
                                                                                                                                                                                                                                                                                                                                                      CGCAAGGAGTTCCAACCATTTTTGAAGAAATGGTATCGTGTTATTGGATTAAGTGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                              TCTGAGCCTGGAAAAGTTATAGTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAAAAACCAGAGTGGCTGTTTACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAAGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen, Rui-hong
Wang, Zhiwei
Wang, Dunrui
Yang, Yonghong
Wehrman, Tom
Ghosh, Reena
                                                          GAAAACAAACCAGTGATTCCCCTTCCTCAGATACTGGGACTAACAGCTTCACCTGGTGTT
                                                                                                                                               CTCACTGTCTTCTCCCTGATCGTGGTGGATGAGTGCCACACACGCACAAGGACACCGTC
                                                                                                                                                                                                         GCAGAGCTTCTGCAGATGGCACTGACCAGCCCCGA---
                                                                                                                                                                                                                                                                                                                                                                                                                                            ĠĠĠÀĀĠĀĊĊĊĠĠĠĊĠĠĊŦĠĊŦŦĀŦĠſĠĠĊĊĀĀĠĊĠĠĊĀĊĊŦĀĠĀĠĀĊŦĠŦĠĠĀŦĠĠĀĠĊ-
                                                                                                                 TATAATAACATCATGAGGCATTATTTGATGCAGAAGTTGAAAAAACAATAGACTCAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yamazaki,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : 2001-03-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Victoria
                                                                                                                                                                                                                                                                                                                                                                                    CAAGGTGGTTGTATTGGTCAACAGGGTGCACCTGGTGACCCAGC---AT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.3%;
47.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 179.6; DB 3;
Pred. No. 1.6e-37;
D; Mismatches 949;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
   1707
                                                                                                                                                                                                                                                                                                                           438
                                                                                                                                                                                                                                                                                                                                                                                   378
                                                                 Ş
                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                          밁
                                                                                                   g
                                                                                                                         성 유
                                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                       성 유
                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                        멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                र्
                                                                                                     1573
                                                                                                                                                               1513
                                                                                                                                                                                                                        1453
                                                                                                                                                                                                                                                    2485
                                                                                                                                                                                                                                                                                1393
                                                                                                                                                                                                                                                                                                                                         1333
                                                                                                                                                                                                                                                                                                                                                                                                  1276
                                                                                                                                                                                                                                                                                                                                                                                                                              2305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1885
                                                                                                                                                                                          2545
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             946
                                                                                                     GAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTG 2664
                                                                                                                                                                                                                                                                               CATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAACCCATGACACI
 ATGATGTATAAAGCTATACATTGTGTTCAAAATATGAAACCAGAGG
                                                                                                                                                                                                                                      GAAGTCATTAGTAAATTTCGCACTGGAAAAATCAATCTGCTTATCG(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGCCATGCAAGAAGTTTGCCATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAA 1827
                                                                                                                                                                                          GAAGAAGGTCTGGATATTAAAGAATGTAACATTGTTATCCGTTATG
                                                                                                                                                                                                                        GAAGTGATCCAGAAGTTCCAAGATGGAACCCTGAACCTTCTGGTGG
                                                                                                                                                                                                                                                                                                                                                            GCGCTTTCCCAGTGGATTACTGAAAATGAAAAATTTGCTGAAGTAGGAGTCAAAGCCCCAC 2424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGATAGTGATGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTGAGGAAGTACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCCTTGCAAACAGTACAACCTCTGCCACAGGCGAGCCAGGATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACACGTGGTGCATCATGTCACCCCAGAACTGCTGCCCCCAGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGCATTTACTATTAAAACTGTTAAAGAAAACCTTGATCAACTGAAAAAACCAAATACAG 1767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTAGCAACTGAAGGTAGCCGGGAGCTGAAGCGGGAGCTGATCAACG
                                                                                                                                                                GAGGAGGGGCTGGACATCCCACATTGCAATGTGGTGGTGCGTTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTCATGGCCCAGAGAATCCAAAACTGGAGATGCTGGAAAAGATCCTGCAAAGGCAGTTC 1275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATTGTGATGGTGATGAAGATGAGGATGATTTAAAGAAACCTTTGAAACTGGATGAAAÇA 2184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTAATGACACAATTCGAATGATAGATGCGTATACTCATCTTGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTCTAGAAATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCCAATGTCA---GAT 1884
                                                                        GTTGCTCACAGTGGTTCAGGAGTTATCGAACATGAGACAGTTAATG
                                                                                                                                                                                                                                                                                                                                           TCCCTCCTGCTCTGGCTCCAGCAGCAGCAGGCCTGCAGACTGTGG
                                                                                                                                                                                                                                                                                                                                                                                                    AGTAGCTCT---AACAGCCCTCGGGGTATCATCTTCACCCGCACCC
                                                                                                                                                                                                                                                                                                                                                                                                                 ACTAGGACTGAGGAATCAGCACGAGGAATAATCTTTACAAAAAACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PACCCAGAATATGAAAATGAAAAGCTGACCAAATTAAGAAATACCATAATGGAGCAATAT 2304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGCGCCGGCTGCTGGCCCTGTTCGATGACCGCAAGAATGAGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCCATGACACCGTCCGCGCCGTGGATGCCTTGGCTGCGCTGCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGAAGAAGCTCATGGACCAAATCCATGACCACCTGGAGATGCCTG
                                                                                                                                                                                                                        CTACCACAGTGGCA 2544
  AGTATGCTCATAAG 2784
                                                                        ATTTCCGAGAGAAG 2724
                                                                                                                                                                                         STCTCGTCACCAAT 2604
                                                                                                                                                                                                                                                                                AGAGGGACCAGCAA 1452
                                                                                                                                                                                                                                                                                                                                         ACATCCGGGCCCAG 1392
                                                                                                                                                                                                                                                                                                                                                                                                    SCCAAAGCGCACAC 1332
                                                                                                                                                                                                                                                                                                                                                                                                                              SACAGAGTGCATAT 2364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCACTTGGC---A 1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTTGAGCCGGAAA 945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGAGCACAGCCAA 825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGGCGCTGGÁGÁCG 1692
                                                                                                                                                                                                                                                                                                              УСЛАТСАЛАЛАЛ 2484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STGGTGATGATGAG 2124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTĠĆGĠĆTTTGGCT 1005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGTTTGGGGACTTG 885
                                                                                                                                                               GCTCTTGACCAAT 1572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGACGCGCTGCTC 1065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NTGAGGCCCTACAA 2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTCTATCACAGG 1125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTCTATAATGAA 2064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----CC 1158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----- 1156
```

þ

```
RESULT 6
US-08-143-576-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                       TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 977-9550
TELEFAX: (212) 664-0525
TELEX: 422523 COOP UI
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 193 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 6, Application Patent No. 5643761 GENERAL INFORMATION:
                                   HYPOTHETICAL:
ANTI-SENSE:
-08-143-576-6
 Query Match
                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/143
FILING DATE: 25-OCT-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: White, John P.
REGISTRATION NUMBER: 28,678
REFERENCE/DOCKET NUMBER: 4356
                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Fisher, Paul B. APPLICANT: Jiang, Hongping TITLE OF INVENTION: METHOD TITLE OF INVENTION: CDNA LINUMBER OF SEQUENCES: 16
                                                                                    MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: John P. White, c/STREET: 30 Rockefeller Plaza
CITY: New York
                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGATGATCTACAAGTCAGTGAAGCTGCCAGTGCTCAAAGTCCGCAGCATGCTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAATAAGGAATTTTGTAGTGG 3136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACTATCAAATAAATGGTGAAATCATCTGC-----AAATGTGGCCAGGCTTGGGGAACA 3078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACCAGCGGCAGCAGTTCCCAGTGGAGCACGTGCAGCTACTCTGCATCAACTGCATGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCCAAGCATTACAAGAATAACCCATCACTAATAACTTTCCTTTGCAAAAACTGCAGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGGACTGGAAGCCTGGGGGTGTCATCAGCTGCAGGAACTGTGGGGAAGGTCTGGGGTCTG 2052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCAACTTCTCGAACTACTATAATGTCTCCAGGGATCCTGTGGTCATCAACAAAGTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTAGCCTGTTCTGGGGAAGATATCCATGTAATTGAGAAAATGCATCACGTCAATATGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAGAATTCAAGGAACTTTACATTGTAAGAGAAAACAAAGCACTGCAAAAGAAGTGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTTTGGAATTACAGATGCAAAGTATAATGGAAAAGAAAATGAAAAACCAAGAAAATATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGATGGAGCAGGCAGTGGCTGCTGTGCAGAAAATGGACCAGGCCGAGTACCAGGCCAAG
                                                       ð
                                                                                                             linear
                                                                                           CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   METHOD FOR GENERATING CDNA LIBRARY AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/08143576
                                                                                                                                                                                                                                                                                                                                                                                                        US/08/143,576
                                                                                                                                                                                                                                                                                              43563/JPW/AKC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              c/o Cooper & Dunham
  124.
  9
 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OF THE GENERA
                                                                                                                                                                                                                                                                                                                                                                                                                                             #1
 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERATED LIBRARY
Length 193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2964
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1812
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2844
```

Score

```
RESULT 8
US-10-131-827-8333
                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-221-268D-11
                                                                                                                                                                                                                                                                                                         멼
                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 7
US-09-221-268D-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Wohlgemuth, Jay
APPLICANT: Fry, Kirk
                                                                                                                                                                                                       Patent No.
                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 3.7%;
Best Local Similarity 96.5%;
Matches 138; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity Matches 138; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 11, Appl
Patent No. 672040
APPLICANT: Woodward, Robert
APPLICANT: Ly, Ngoc
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DI
TITLE OF INVENTION: CHRONIC INFLAMMATORY DISEASES
FILE REFERENCE: 506612000120
CURRENT APPLICATION NUMBER: US/10/131,827
CURRENT FILING DATE: 2002-09-06
PRIOR APPLICATION NUMBER: US 10/006,290
PRIOR FILING DATE: 2001-10-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT FILING DATE: 1998-12-23
PRIOR APPLICATION NUMBER: 08/316,537
PRIOR FILING DATE: 1994-09-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Fisher, Paul B.
APPLICANT: Jiang, Hongping
TITLE OF INVENTION: NUCLEIC ACID MOLECULES
TITLE OF INVENTION: NUCLEIC ACID SEQUENCE
FILE REFERENCE: A34534-A-A (070050.1637)
CURRENT APPLICATION NUMBER: US/09/221,268D
CURRENT FILING DATE: 1998-12-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1993-10-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 08/143,576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
ORGANISM: homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 193
                                                                                                                                                                                                                                                                                                                                                                                                        3067
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3007
                                                                                                                                                                                                                                                                                                                                         3127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3007
                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                        8333, Application o. 6905827
                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  سر
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FastSEQ
                                                                                                                                                                                                                                                                                                                                                                        CTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGTGGCCAG 3066
                                                                                                                                                                                                                                                                                                                                  TTTGTAGTGGTTTTCAAAAATAA 3149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCAAAAGAAGTGTGCCGACTATCAAATAAATGGTGAAATCATCTGCAAATGTGGCCAG 3066
                                                                                                                                                                                                                                                                                                         TTTGTAGTGGTTTCAAAATATCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTTGTAGTGGTTTCAAAATATCA 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTTGCCTTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGCAAAAGAAGTGTGCCGACTAT-AAATAATGGTGAAATCATCTGCAAATGTGGCCAG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTGTAGTGGTTTTCAAAAATAA 3149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ID NOS: 30
SEQ for Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    96.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/09221268D
                                                                                                                                                                                                                         US/10131827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 124.6; DB 3
Pred. No. 2.3e-23;
0; Mismatches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 2.3(); Mismatches
                                                                                                                                                                                                                                                                                                         142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2.3e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WHICH SPECIFICA
ENCODING MDA-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ΄
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4.
                                                                                                    DIAGNOSING AND MONITORING AUTOIMMUNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALLY HYBRIDIZE WITH
AND PHARMACEUTICAL COMPOSIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAAATAAGGAAT 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAAAATAAGGAAT 3126
|||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                           59
```

CURRENT APPLICATION DATA:

```
; PRIOR APPLICATION NUMBER: US 60/
; PRIOR FILING DATE: 2001-06-08
; NUMBER OF SEQ ID NOS: 9090
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 8333
; LENGTH: 530
                                                                                                                                                                                                                                                                                                                RESULT 9
US-08-232-463-14/c
                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo US-10-131-827-8333
                                                                                                                                                                                                                                                                Sequence 14, Application Patent No. 5670367
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                    APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT FO
NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suit
ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   / Match 2.7%;
Local Similarity 57.3%;
nes 279; Conservative
                                                                                                                           CITY: Alexandria
                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2024
                                                                                                                                                                                                                                                                                                                                                                                                              2497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      278
                                                                                                                                                                                                                                                                                                                                                                                517
                                                                                                                                                                                                                                                                                                                                                                                                                                            457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGATAGATGCGTATACTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATGAGGATGAT-TTAAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTCATAGAAGATGATGATGATGAGGGTGGTGATGATGAGTATTGTGA-TGGTGATGAA
                                                                                                                                                                                                                                                                                                                                                                                                              AAATTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTGGACACAGCAGTGAGTTCAAACCCATGACACAGAATGAACAAAAAAGAAGTCATTAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGATTACTGA-AAATGAAAAATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTC-GCTTGATGATATCCTCTAAGATGAACGAGTCGATGCTGATCTCCGCGTTCTCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATGA--AAAGCTGACCAAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGATTTTAAAGATGGCTCTAAAGTGTGCATAGAGGTTGGTGTTCAGACAAAATATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTATTTTT--TGAAAACAATAAAATGTTGAAAAGGCTGGCTGAAAAACCCAGAATATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATGAAGATGATCTTGAGGCTGGTATCGTCTGTGCATGAAGGTGATTGAGTGCTGGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGTGATAAATTATGATCTTGATGTCGGTGGTGATGATTAATTGTGTGACTCGTCATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ٧A
                                                                                                                                                                                                                                                                                                                                                                                 ACAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTGGTGGCCGTTGGGATGTGACAGCCTGGAGATGATATGTGCATAACGAGATCCAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATCAGCACGAGGAATAATCTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGT
                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                 523
                                                                                                                                                                                                                                                                                                     US/08232463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/296,764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 91; DB 3;
Pred. No. 4.6e-14;
                                                                                                                                            Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                         FOWLPOX VIRUS
   Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    200;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 530;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                              516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           456
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6
```

```
; Sequence 17284, Application US/09949016; Patent No. 6812339; GENERAL INFORMATION:
; APPLICANT: VENTER, J. Craig et al.
; TITLE OF INVENTION: POLYMORPHISMS IN KNOWN GENES AS:
; TITLE OF INVENTION: WITH HUMAN DISEASE, METHODS OF
; FILE REFERENCE: CL001307
; CURRENT APPLICATION NUMBER: US/09/949,016
; CURRENT FILING DATE: 2000-04-14
; PRIOR APPLICATION NUMBER: 60/241,755
; PRIOR FILING DATE: 2000-10-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; CLONE: pTZgpt-F18
US-08-232-463-14
                                                                                                                                                                                                US-09-949-016-17284
                                                                                                                                                                                                                                                                                                                                              뭐
                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Watches 19; Conserva
                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX: 899149
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNET, DOLL STEPHEN A.

NAME: BENT, Stephen A.

REGISTRATION NUMBER: 29,768

REFERENCE/DOCKET NUMBER: 3047

TELECOMMUNICATION INFORMATION:

TELEPHONE: (703)836-9300

TELEFAX: (703)683-4109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: EP 91 FILING DATE: 26-AUG-1991 ATTORNEY/AGENT INFORMATION: NAME: BENT, Stephen A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: Sil
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH:
TYPE: n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic acid
                                                                                                                                                                                                                                                                                                                                                                          GATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAAACAATAAAATGTTGAAAAGG 2235
                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGATGAGTATTGTGATGGTGATGAAGATGAGGATGATTTAAAGAAACCTTTGAAACTG 2175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATAATGAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGATAGTGATGAGGGTGGT 2115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCTACAAATTAATGACACAATTCGAATGATAGATGCGTATACTCATCTTGAAACTTTC 2055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGTCAGATTTTGGAACTCAACCCTATGAACAATGGGCCATTCAAATGGAAAAAAAGCT 1935
                                                                                                                                                                                                                                                                         RRRRRRRRRRRRRRRRRRRRRRRATCGCAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAAAAAAAAGGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTGAGGAAGTACAATGAG 1995
                                                                                                                                                                                                                                                                                                          CTGGCTGAAAACCCAGAATATGAAAATGAAAAGCT
                                                                                                                                                                                                                                                                                                                                            7218 base
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.1%; Score 69.4; DB 2; llarity 4.8%; Pred. No. 1.3e-07; Conservative 230; Mismatches 146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/07/935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30472/114 IMMU
                                                                                         ASSOCIATED OF DETECTION AND USES THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
```

```
; PRIOR APPLICATION NUMBER: 60/237,768
; PRIOR FILING DATE: 2000-10-03
; PRIOR APPLICATION NUMBER: 60/231,498
; PRIOR FILING DATE: 2000-09-08
; NUMBER OF SEQ ID NOS: 207012
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 17284
; LENGTH: 12214
                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Arabidopsis thaliana
US-09-590-968B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
US-09-590-968B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
RESULT 12
US-09-853-768-10
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 占
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; ORGANISM: Human US-09-949-016-17284
                                                                                                                                             8
                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 54.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1, Application US/09590968B Patent No. 6737561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 2.0%;
Best Local Similarity 62.1%;
Matches 105; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ray, Animesh
APPLICANT: Golden, Teresa Ann
TITLE OF INVENTION: GENE ENCODING SHORT INTEGUMENTS
FILE REFERENCE: 176/60581
CURRENT APPLICATION NUMBER: US/09/590,968B
CURRENT FILING DATE: 2000-06-09
PRIOR APPLICATION NUMBER: 60/138,316
PRIOR FILING DATE: 1999-06-09
NUMBER OF SEQ ID NOS: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 6184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTATCGCTACCACAGTGGCAGAAGAAGGAAGGTCTGGATATTAAAGAATGTAACATTGTTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAA 2694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGAAATCATCTCAAATGCAGGATACAATTTCCGAGATGGGGCATGTGACACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGCGGCACCTAGAGACTGTGGATGGAGCCAAGGTGGTTGTATTGGTCA 11598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTA 1246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTTTACATTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ссадаястсся дется дестрасся в предости по п
                                                                                                                                                                                                                                                                                                                                                           CGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGAGCT 2643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATATCATCATCTGGCTGCCCACGGGTGCCGGGAAGACCCGGGCGGCTGCTTATGTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                      TTAGTTGCCACAAGCGTTGCTGAGGAAGGACTTGATATTAGGCAATGTAACGTTGTTATG
                                                                                                                                                                                                                                                                                      CGTTTCGACCTTGCAAAGACGGTGCTGGCATACATTCAGTCTCGTGGCCGGGCAAGAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.9%; Score 63; DB 3; Le
54.5%; Pred. No. 6.4e-06;
tive 0; Mismatches 105;
                                                                                                                                                ACATACTCATGGTTGAGAGAGGAAATGTATCTCACGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 66.6; DB:
Pred. No. 1e-06;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 6184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 12214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   <u>.</u>
                                                                                                                                                2722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1137
                                                                                                                                                                                                                                                                                                                                                                                                                                   2611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
PATENTIAL INFORMATION:

APPLICANT: Donna T. Ward

APPLICANT: Andrew T. Watt

TITLE OF INVENTION: ANTISENSE MODULATION OF HELICASE-MOI EXP

FILE REFERENCE: RTS-0217

CURRENT APPLICATION NUMBER: US/09/853,768

CURRENT FILING DATE: 2001-05-10

NUMBER OF SEQ ID NOS: 91

SEQ ID NO 10

LENGTH: 5852

TYPE: DNA

ORGANISM: Homo sapiens

FEATURE:

NAME/KEY: CDS

LOCATION: (1)...(4568)

US-09-853-768-10
                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/853,768
CURRENT FILING DATE: 2001-05-10
NUMBER OF SEQ ID NOS: 91
SEQ ID NO 3
LENGTH: 7037
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                            Ś
                                                              밁
                                                                                          á
                                                                                                                              밁
                                                                                                                                                         Ś
                                                                                                                                                                                                                                                              US-09-853-768-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 13
US-09-853-768-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3, Application US/09853768
Patent No. 6444466
GENERAL INFORMATION:
APPLICANT: Donna T. Ward
APPLICANT: Andrew T. Watt
TITLE OF INVENTION: ANTISENSE MODULATION
FILE REFERENCE: RTS-0217
                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 101; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 1.8%;
Best Local Similarity 60.8%;
Matches 101; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 10, Application US/09853768
                                                                                                                                                                                                                                                                           NAME/KEY: CDS
LOCATION: (183)...(5957)
                                                                                                                                                              2477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418 CCACAGAATATCGATCCTATGTTCAATCTAAAGGAAGAGCAAGGGC
                                                                                              CAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTTATC
                                                                                                                                                             GTATTGTAGAAGAGGGTGTTGATATACCAAAATGCAACTTGGTGGTTCGTTTTGATTTGC 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATTGTTATC
CCACAGAATATCGATCCTATGTTCAATCTAAAGGAAGAAGCAAGGGC
                            TCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGAGC
                                                                                                                              AACAGGAAGAGGTACTTAGGAAATTTCGAGCACATGAGACCAACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCACCAATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACAGGAAGAGTACTTAGGAAATTTCGAGCACATGAGACCAACCTG
                                                                                                                                                                                             1.8%; ilarity 60.8%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 62; DB 3; Le
Pred. No. 1.2e-05;
0; Mismatches 65;
                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                            ဝှ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HELICASE-MOI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 58
                                                                                                                                                                                                                              Length 70
                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EXPRESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EXPRESSION
 1852
                                2642
                                                                CGTTTTGATTTGC 1806
                                                                                                                                                                                                                                 037;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTATCGCTACCA 2536
                                                                                              CGTTATGGTCTCG 2596
                                                                                                                              CTTATTGCAACAA 1746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTTATGGTCTCG 2596
                                                                                                                                                              TTATCGCTACCA 2536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Gaps 0;
                                                                                                                                                                                              0; Gaps
```

밁

```
; LENGTH: 371
; TYPE: DNA
; ORGANISM: Human
US-09-222-575-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Yuqiu, Jiang
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Xu, Jiangchun
TITLE OF INVENTION: Compositions for the Tre
TITLE OF INVENTION: and Methods for Their U
FILE REFERENCE: 210121.470
CURRENT APPLICATION NUMBER: US/09/222,575
CURRENT FILING DATE: 1998-12-28
NUMBER OF SEQ ID NOS: 174
SOPTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 46
                                                                                                                                                                                                                                                           RESULT 15
US-09-389-681-46/c
; Sequence 46, Application US/09389681A
; Patent No. 6518237
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
US-09-222-575-46/c
                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
Patent No
GENERAL I
                                             NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 46
LENGTH: 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 164; Conserv
TYPE: LNA
ORGANISM: Homo
-09-389-681-46
                                                                                                            APPLICANT: Yuqui, Jiang
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Xu, Jiangchun
TITLE OF INVENTION: COMPOSITIONS FOR THE TREATMENT
TITLE OF INVENTION: DIAGNOSIS OF BREAST CANCER AND
FILE REFERENCE: 210121.470C3
CURRENT APPLICATION NUMBER: US/09/389,681A
CURRENT FILING DATE: 1999-09-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ce 46, Application
No. 6387697
L INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                             2854
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        164;
                                                                                                                                                                                                                                                                                                                                                                                                                                                126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           364
                                                                                                                                                                                                                                                                                                                                                                               99
                                                                                                                                                                                                                                                                                                                                                                             AAGGAAAATAA 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACTTTATTTTACGCCTTCAGACATGGGACGAAGCAGTATTTAGGGAAAAGATTCTGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAAGCTATACATTGTGTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAA 2793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGACATTGCACAGTGCAATCTTGTCATCCTTCATGAGTAATGTGGGCAATGTCATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGATATTAAAGAATGTAACATTGTTATCCGTTATG-GTCTCGTCACCAATGAAATAGCC
                                                                                                                                                                                                                                                                                                                                                                                                             TACAAGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTACAGATGCAAAGTATAATGGAAAAGAAAATGAAAACCAAGAGAAAATATTGCCAAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTGGTTCAGGAGTTATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGTCCAGGCCCGTGGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>ATACAGACTCATGAAAATTCATCAGAGATAGTCAAGAAAACCAAAACCTGTACCTGAT</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATGCTT--GGTGTAATTGAAAAAGAACAAATAAACATGTACAAAGAAAAAATGATGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.6%;
llarity 52.7%;
Conservative
             sapien
                                                                                 Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                             2864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/09222575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 54.6; DB 3;
Pred. No. 0.00023;
0; Mismatches 144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the Treatment
Their Use
                                                                                  ۵.
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         144;
                                                                                                                                                                AND
METHODS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 371;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and Diagnosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                  FOR
                                                                                                                                                                  THEIR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of Breast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2853
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127
                                                                                                                                                                                                                                                                                                                                                                                                                                                67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cancer
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                         5
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 1.6%;
Best Local Similarity 52.7%;
Matches 164; Conservative
                                                                                                          2854
                                                                                                                                                                                                                                                                                                                 2794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2614
                                                                                                                                                                                                                                                                                                                                                                                                                   186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364
                                                                                                                                                                                                           126
    99
                                                                                                                                                                                           ATACAGACTCATGAAAAATTCATCAGAGATAGTCAAGAAAAACCAAAAACCTGTACCTGAT 67
                                                                                                                                                                                                                                                                                                     ттасадатссаластаталтссалаласалал тсалаласса ттасадат ттасада ттасад
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGTCCAGGCCCGTGGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCAC 2673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGACATTGCACAGTGCAATCTTGTCATCCTTCATGAGTAATGTGGGCAATGTCATCAAA 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGATATTAAAGAATGTAACATTGTTATCCGTTATG-GTCTCGTCACCAATGAAATAGCC 2613
                                                                                                                                                                                                                                                                                                                                                                                                                       GACTTTATTTTACGCCTTCAGACATGGGACGAAGCAGTATTTAGGGAAAAGATTCTGCAT 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAGCTATACATTGTGTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAA 2793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGCTT--GGTGTAATTGAAAAAAGAACAAATAAACATGTACAAAGAAAAAATGATGAAT 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTGGTTCAGGAGTTATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTAT 2733
AAGGAAAATAA
                                                                                                     TACAAGAATAA 2864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 54.6; DB 3;
Pred. No. 0.00023;
0; Mismatches 144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     371;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTTCTGACTAGT 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3; Сарв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2;
```

Search completed: March 12, 2006, 05:35:44 Job time: 1014 secs

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Command line parameters:

-MODEL=frame+ p2n.model -DEV=xlh
-Q=/abss/ABSSWEB spool/US09515363/runat 10032006_181128_7937/app_query.fasta_1
-Q=/abss/ABSSWEB spool/US09515363/runat 10032006_181128_7937/app_query.fasta_1
-DB=GenEmbl -QFMT=fastap -SUFFIX=rge -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000 -HOST=abss04
-USER=US09515363_@CGN_1_1_4939_@runat_10032006_181128_7937 -NCPU=6 -ICPU=3
-NO_MMAP -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG -DEV_TIMEOUT=120
-WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
   \omega \approx \mu
                                                                                                                                                  Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being part and is derived by analysis of the total score distribution.
                                                                 Score
  5311
5311
5311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic search, using trame
                                                                                                                                                                                                                                                                                                   Xgapop 10.0
Ygapop 10.0
Fgapop 6.0
Delop 6.0
 100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        March 13, 2006, 15:10:59; Search time 12661 Seconds (without alignments) 4601.891 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-515-363C-2
5311
                                                                Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5883141 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MSNGYSTDENFRYLISCFRA......LPITFPNLDYSECCLFSDED 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenEmbl: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.7
Copyright (c) 1993 - 2006 Biocceleration Ltd.
                                                                                                                                                                                                                                                                                                                 gb ba:
gb in:
gb env:
gb om:
gb ov:
gb pat:
gb pr:
gb pr:

                                                                                                                                                                                                                gb_ro:*
gb_sts:*
gb_sy:*
gb_un:*
gb_vi:*
gb_htg:*
gb_pl:*
                                                                Length
 3380
3380
3380
                                                                    몂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xgapext
Ygapext
Fgapext
Delext
   \sigma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28421725653 residues
CQ776470
CS108225
CS113027
                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.5
0.5
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     plus pzn model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11766282
CQ776470 Sequence
CS108225 Sequence
CS113027 Sequence
                                                                Description
                                                                                                                                                                 printed,
```

ναφφφφφ νομουφυ	2 2 3 3 2 3 2 3 2 3 2 3 3 3 3 4 3 3 5 7 8 9 9 9 4 3 4 3 5 7 8 9 9 9 4 3 4 3 5 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	10 11 11 11 11 11 11 11 11 11 11 11 11 1	40000
091.	19 13 13 13 13 13 13 13 13 13 13 13 13 13	00146. 00146. 00146.	5311 5307 5307 5307 5307 5307
000000		0000040400000	100.0 99.9 99.9 99.9 99.9
000007	1284 3458 2493 2336 2584 2584 2590 2613 2613 2613 2613 2613 2613 2613 2613	230447724377777	34443 7333 74333
თთთთთ თ	ο το α α ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο	 	თთთთთ
04276 13080 177647 77659 10805 11302	33499 3389 3389 3389 3389 3389 3389	737 737 737 737 737 737 737 737 737 737	9584 3386 3667 4281 4281 0083
\$042767 \$042767 \$130808 \$0776474 \$0776595 \$108058 \$113026	700838 203528 203528 20999 22999 29299 771935 57193 57193 9823 9823 9823 9823 9823 9823 9823 98	17378 75132 777379 77339 774384 80200 780200 780200 780200 79104 14144 14141 1	5844 3863 6676 2815 5628
quenc quenc quenc quenc quenc	Xenopus 1 Bos tauru Mus muscu Mus muscu Homo sapi Sequence Primer fo Sequence Homo sapi Sequence Sequence Sequence Sequence Sequence	Homo sapi Mus muscu Sequence Mus muscu Mus muscu Homo sapi Sequence Sequence Sequence Gequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence Sequence	Homo sapi Sequence Sequence Sequence Sequence Sequence

ALIGNMENTS

Alignment Scores: Pred. No.:	REFERENCE AUTHORS TITLE JOURNAL FEATURES BOUICE	RESULT 1 CQ776470 LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANISM
3cores: 1.77e-312	Mammalia; Hominidae 1 Ohtani,N. Methods of pulmonary Patent: El Genox Ress	CQ776470 Sequence 156 from Patent EP1394274. CQ776470 CQ776470.1 GI:45379860 . Homo sapiens (human) Homo sapiens
Length: 33	Eutheria; Euarchontoglires; Primat; Homo. Sugita,Y., Yamaya,M., Kubo,H., Na testing for bronchial asthma or c disease 1394274-A 156 03-MAR-2004; earch, Inc. (JP) Location/Qualifiers 1. 3380 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"	3380 bp DNA 1 nt EP1394274.
3380	es; Catarrhini; gai,H. and Izuhara,K. chronic obstructive	linear PAT 11-MAR-2004

8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Score: Percent S: Best Loca: Query Mato DB: US-09-515 Qy Db
	imilarity: l Similarit ch: -363C-2 (1363C-2 (1-
Leu Aggague Cocorda aggague ag	5311.00 100.0% y: 100.0% 100.0% 6 1025) x CQ77 AsnGlyTyrSer
	Match Conse Misma Indel Gaps: (1-3380
	tive: 0 es: 0
CTTTCTGCC [TCY8PheArg
TIGCA 288 TIGCA 288 TIGCA 288 TIGCA 288 TIGCA 288 TIGCA 348 TIGCA 468 TIGCA 468 TIGCA 468 TIGCA 468 TIGCA 468 TIGCA 160 TIGCA 708 TIGCA 708 TIGCA 708 TIGCA 948 TIGCA 948 TIGCA 948 TIGCA 1068	ν ν ν γ Ο—¤
6 8 <td>Q D Q D D Q D D D D D D D D D D D D D D</td>	Q D Q D D Q D D D D D D D D D D D D D D
1309 TTG 401 Proc 1369 CCAC 421 Leul 1429 CTC 441 Ile 1489 ATC 461 Tyri 1549 TATT 501 Lyg 501 Lyg 501 Lyg 1669 ATATT 521 Vall 1729 GTT 1969 GCAC 621 Asp 621 Asp 661 Asp 681 Phe 681 Phe	1129 GAA 341 Tyr 1189 TAC 361 Val 1249 GTT
AAGAAAI	
ICGTGTTA:	
PARGTGGTG ABGTGGTG AGINGAGTAGTAGTAGTAGTAGTAGTAGTAGTAGTAGTAGTAGT	
CCCAACTGI CCCAACTGI CTCAAATCO CTCAAATCO 	 AAAAACCI rGluPro(TGAGCCTV TGAGGAG' CAAGGAG' CAAGGAG'
INITIELEUGIUASNSET	

```
RESULT 2
CS108225
LOCUS
                                                                                                                           3109
                                                                                                       1001
                                                                                                                                                                     3049
                                                                                                                                                                                                               2989
                                                                                                                                                                                                                                                         2929
                                                                                                                                                                                                                                                                                                  2869
                                                                                                                                                                                                                                                                                                                                            2809
                                                                                                                                                                                                                                                                                                                                                                                      2749
                                                                                                                                                                                                                                                                                                                                                                                                                                2689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2209
                                                                                                                                                 981
                                                                                                                                                                                          961
                                                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                   941
 CS108225
                                                                                                                                                                                                                          ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle
                                                                                                                                                                                                                                                        HisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                                                                           IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro
                                                                                                                                                                                                                                                                                                                                                                                    IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AsnGluLysPheAlaGluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHisSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCysLeu
                                                                                                                           IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                                                                               SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle
                                                                                                                                                                                                                                                                                                                                                                                                  ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetGlnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAAAAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyLysIleAsnLeuIeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTGAAAACAATAAAATGTTGAAAAGGCTGGCTGAAAACCCCAGAATATGAAAATGAAAAG
                                                       PheSerAspGluAsp
                                                                                                                                                                       ATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGAAAAATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTCGAGCCAGAGCTGATGAGAGCACCT
                                                                                                                                                                                                                                                                                                  AATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATC
                                                               1025
 3380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGTCACCAATGAAATAGCCATGGTCCAGGCCCGT
 đq
 DNA
 linear
  PAT
  22-JUN-2005
                                                                                                        1020
                                                                                                                                                                     3108
                                                                                                                                                                                          980
                                                                                                                                                                                                                3048
                                                                                                                                                                                                                                    960
                                                                                                                                                                                                                                                          2988
                                                                                                                                                                                                                                                                              940
                                                                                                                                                                                                                                                                                                                        920
                                                                                                                                                                                                                                                                                                                                             2868
                                                                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                                                                                          880
                                                                                                                                                                                                                                                                                                                                                                                                                                                     860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2268
                                                                                                                            3168
                                                                                                                                                 1000
                                                                                                                                                                                                                                                                                                   2928
                                                                                                                                                                                                                                                                                                                                                                                      2808
                                                                                                                                                                                                                                                                                                                                                                                                                                2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
             음 중
                                                유 성
                                                                                     밁
                                                                                                           Ş
                                                                                                                                    밁
                                                                                                                                                    S
                                                                                                                                                                          밁
                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                뮹
                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                           -09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scores:
                                                                                              589
                                                                                                                                                                                 469
                                                                                                                                                                                                     101
                                                                                                                                                                                                                          409
                                                                                                                                                                                                                                                                     349
                                                                                                                                                                                                                                                                                                              289
                                                                                                                                                                                                                                                                                                                                                        229
                                                                                                                                                                                                                                                                                                                                                                                                   169
                                                                                                                                                           121
                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                         19
                                                                                                                                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
CS108225
CS108225.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genentech, Inc. (US)
Location/Qualifiers
1. .3380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          erythematosis
Patent: WO 2005051988-A 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wood, W.I. and Wu, T.D. Compositions and methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Abbas,A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hominidae; Homo.
            GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnM
                                                                                                         GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaGluAsnAsnGlyAsn 160
                                                                                                                                                                                           AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGlnLeuLeuAsnLeu 120
                                                                                                                                                                                                                         GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGA
                                                                                                                                                                                                                                         GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetA
                                                                                                                                                                                                                                                                    CTGCTGCTGA
                                                                                                                                                                                                                                                                              LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpT
                                                                                                                                                                                                                                                                                                                                                        ATGTCGAATGCGTATTCCACAGACGAGAATTTCCGCTATCTCATCT
                                                                                                                                                                                                                                                                                                                                                                                                           MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS
                                                                                               GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGAAAT 648
                                                                                                                                                   LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuA
                                                                                                                                                                                 GACTIGCCCT
                                                                                                                                                                                                                                                                                                               GAGGTGAAGGAGCAGATTCAGAGGACAGTCGCCACCTCCGGGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                           (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             233 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bodary, S., and Wu, T.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.77e-312
5311.00
100.0%
100.0%
100.0%
                                                                                                                                                                                CTCCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTC 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                           ×
                                                                                                                                         CTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAG 588
                                                                                                                                                                                                                                                                                                                                                                                                                                           CS108225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebra Euarchontoglires; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clark, H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO2005051988.
                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-3380)
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-JUN-2005;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schoenfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                3380
1025
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0f
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 γв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Į.
                                                                                                                                                                                                                                                                                                                                                                                                 SerCysPheArgAla 20
                                                      SnTrpPheSerAla 180
                                                                                                                                                    spLysCysMetGlu 140
                                                                                                                                                                                                                                         CTCGGGAATTCGTG 408
                                                                                                                                                                                                                                                                                 hrArgGluPheVal 80
                                                                                                                                                                                                                                                                                                                             etGlnAlaValGlu 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ta; Euteleostomi;
Catarrhini;
                                                                                                                                                                                                                           ACCCTGAGCTCACG 468
                                                                                                                                                                                                                                                                                                                TGCAGGCAGTTGAA 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stemic lupus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     lliams,P.M.,
                             .uLeuThrGlySer 200
```

음 성 음 성 음 성

뮍

5

뮍 Ş 8

뮹

유

В

중 유

S

밁

중 음 중

8 8 8

ર્ક 망 8 B ঠ 밁 5 밁 ð 밁

•												•			•		•	• •
561 IleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyThrGlnProTyrGluGln 580	541 IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArg 560	521 ValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla 540	501 LysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPheThrIleLysThr 520	481 LeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThrLysGlnAla 50 	461 TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLysProValIlePro 480 	441	21 1	01 ProGluValValLysSerCysAspIleIleIleSerThrAlaGlnIleLeuGluAsnSer 42 	381 1	61 1	41	321 GluGlyLyBABnIleIleIleCyBLeuProThrGlySerGlyLyBThrArgValAlaVal 34 	301 9	81 (61 SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnM 	41 GluabnabnSerSerGluSerSerPhealaabpSerSerValValSerGluSerAbpThr 2 	21 GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGlyMet 2 	AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 2
γΩ	dg Qy	Qy	dd Qy	g dg	D Q	p	D 5) D #	S B 8) b	, da	S B 8	Db QY	p 5	} b \$	ם א	S B S	Db
921 HisVallleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrTle 940 	901 SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle 920 	881 IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro 900 	861 ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetGlnSer 880 	luHisGluThrValasnAspPheArgGluLysMetMetTyrLysAlaIleHisCys 	21 GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal 8		of Gryphaliters in constitution in the constitution of Graphal and Constitution of Graphalana Caarcage Transaction of Gra			- GIATINETIEFICE IN THE STATE OF THE STATE O		PheGluAshAshAshAshCheurysArgLeuAldeIuAldeIuAldeIuIyIcluAsi 	61 ABPABPLEULYBLYBPTOLEULYBLEUABPGIUITITABPATGFRELEUMECTHILEUFHE G 	#1	21 TO COMPANY TO SEASON OF CONTROL OF THE PROPERTY OF THE PROP	69 GCAGAACATTTGAGGAAGTACAATGAGGCCCTACAATTAATGACACAATTCGAATGATA 2	TPATATIEGITMECGIULYBLYBAIGATGLYBLYBGIYABHAIGHIYBGIYABHAIGHI 	

Qy 1 MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla 20	ORIGIN Alignment Scores: Pred. No.: Score: Percent Similarity: Best Local Similarity: Ouery Match: DB: OUS-09-515-363C-2 (1-1025) x CS113027 (1-3380)	neria; Euarchontoglires; Primates; Catarrhini; no. Chirakkal,H. D5054507-A 45 16-JUN-2005; Sheffield (GB) Lion/Qualifiers 3380 anism="Homo sapiens" type="unassigned DNA"	from Patent WO2005054507. GI:68224599 (human)	1001 LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCysLeu 10	Db 2929 CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATT 2988 Qy 941 ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnileAsnGlyGluIle 960
	5	B & B & B &	? B & B &	B & B & B	2 Q B Q B
	erProGluProGluLeuGlnLeuArgProTyrGlnMetGluVal.	89 GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTTCAGAATCAGACACA 61 SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnMet	1 AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValA	AGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAA luSerGlyValargGluLeuLeuLysargIleValGlnLysGluAsnT.	

FEATURES source	2569 TGTAACATTGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGT 2628
REFERENCE AUTHORS TITLE JOURNAL	81 GlyLysIleAsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLysGlu 80
JOURNAL PUBMED	61 SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgT
REFERENCE AUTHORS TITLE	41 AsnGluLysPheAlaGluValGlyValLysAlaHisHisLeuI
ORGANISM	CAlaTyrAlaLeuSerGlnTrpIleThrGlu 7
ACCESSION VERSION KEYWORDS SOURCE	⊑
AF095844 LOCUS DEFINITION	681 PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys 700
	;LeuAspG1uThrAsp; CTGGATGAAACAGAT;
Db 316 Qy 102	89 ATAGAAGATGATAGTGATGAGGGTGGTGATGATGAGTATTGTGATGGTGATGA
Qу 100	ATGCGTATACTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAG leGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAspG
ω	621 AspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAlaVal 640
рь 304 Qy 98	
	601 AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle 620
Db 298	581 TrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsnArgLysGluArgValCys 600
	49 ATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAA 19
Db 292	ets
N	1789 ATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAAACTTCTAGAAATAATGACAAGG 1848
Оу 90	29 GTTAAAGAAAACCTTGATCAACTGAAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCC 17
2	521 ValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla 540
Db 274 Ov 88	69 AAAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACT 1
	501 LysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPheThrIleLysThr 5
N	
Qу 84	005 Elgulouvicumus Eviloualis Eviloual
Db 262	461 TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLysProValIlePro
Qy 82	89 ATCATTGATGAATGTCATCACCACCAACAAGAAGCAGTGTATAATAACATCATGAGGCAT 15

8 8 8 8 8

8 8 8 8 8 8 8 8 8 8 8 8 8

B & B &

8 & 8

B 65 B 65

8 8 8 8

	W168th, New York, NY 10032, USA Location/Qualifiers 13380	ä	
_	998) Urology		
	11805321 2 (bases 1 to 3380) Kang,DC. and Fisher,P.B.	REFERENCE AUTHORS	
	properties ci. U.S.A. 99 (2), 637-64		
	mda-5: An interferon-inducible putative RNA helicase with double-stranded RNA-dependent ATPase activity and melanoma	TITLE	
and	1 (bases 1 to 3380) Kang,D.C., Gopalkrishnan,R.V., Wu,Q., Jankowsky,E., Pyle,A.M.	REFERENCE AUTHORS	
omi	s (human) s Metazoa; Chordata; Craniata; Vertebrata; Euteleost utheria; Euarchontoglires; Primates; Catarrhini; Homo.	SOURCE ORGANISM	
	H	ACCESSION VERSION	
I-20)A5)	AF095844 3380 bp mRNA linear PRI 23-JAN- Homo sapiens melanoma differentiation associated protein-5 (MDA mRNA, complete cds.	RESULT 4 AF095844 LOCUS DEFINITION	
	29 TTTAGTGATGAGGAT 3243	Db 32	
	21 PheSerAspGluAsp 1025	Оу 10	
32	69 AAAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTA	Db 31	
1 10	1 LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCy	10	
-		<u>۔</u> د	
10	81 CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTyr	Qy 9	
98	61 IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro 	Qy 9,	
30	89 GTAAGAGAAAACAAAGCACTGCAAAAGAAGTGTGCCGACTATCAAATAAAT	Db 29	
96	41 ValArgGluAenLyeAlaLeuGlnLyeLyeCyeAlaAepTyrGlnIleAenGlyGluIle	Qy 9.	
29	21 HisVallleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle 	Qy 9: Db 29:	
N	69 TCACTAATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATC	סם 28ו	
9	1 SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIl	v	
286	09 ATAATGGAAAAGAAAATGAAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCA	28	
900	81 ilemetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro	Qy 81	
280	49 GTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAAGT	Db 27	
. N	9 ATCGAACATGAGACAGTTAATGATTTCCGAGAGAGAAGATGATGTATAAAGCTATACATTG	26	
	41 IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys	Qy 8.	
N	29 GGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTT	26	
840	21 GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal	0y 8;	

```
Score:
                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                              ঠ
                                                                                                                          밁
                                                                                                                                               S
                                                                                                                                                                       В
                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                             멂
                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                          US-09-515-363C-2 (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment
                                  В
                                                   ঠ
                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
            141
                                                       121
                                                                               469
                                                                                                    101
                                                                                                                           409
                                                                                                                                                                        349
                                                                                                                                                                                                                      289
                                                                                                                                                                                                                                                                  229
                                                                                                                                                                                                                                                                                                               169
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scores:
                                                                                                                                                 81
                                                                                                                                                                                              61
                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                    GluValLy
                                                                                                                                      GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr
                                                                                                                                                                                    LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal
                                                                                                                                                                                                                       GAGG
                                                                                                                                                                                                                                                                                                               ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCC
                                  ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                                                                                                                                                                                                                                                                                          MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaGluAsnAsnGlyAsn
                                                                                                                             GAGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product="melanoma differentiation associated protein-5"
/protein_id="AAG34368.1"
/db_xref="GI:11344594"
/db_xref="GI:11344594"
/translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE
/translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE
/translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE
/translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE
QIQRTVATTSGNMQAVELLLSTLEKGVWHLGWTREFVEALRRTGSPLAARYMNPELTDL
PSPSFENAHDEYLQLLNLLQPTLVDKLLVRDVLDKCMEEELLTIEDRNRIAAAENNGN
ESGVRELLKRIVQRULEKEVWGMENNSSESSFADSSVVSESDTSLAEGSVSCLDESLGH
NSNMGSDSGTMGSDSDEENVAARASPEPELQLRPYQMEVAQPALEGKNIIICLPTGSG
KTRVAVYIAKDHLDKKKKASEPGKVIVLVNKVLLVEQLFRKEFQPFLKKWYRVIGLSG
DTQLKISFPEVVKSCDIIISTAQILENSLLNLENGEDAGVQLSDFSLIIIDECHHTNK
EAVYNNIMRHYLMQKLKNNRLKKENKPVIPLPQIIGLTASPGVGGATKQAKAEEHILK
LCANLDAFTIKTVKENLDQLKNQIQEPCKKPAIADATREDPFKEKLLEIMTRIQTYCQ
MSPMSDFGTQPYEQWAIQMEKKAAKKGNRKERVCAEHLRKYNEALQINDTIRMIDAYT
HLETFYNEEKDKKFAVIEDDSDEGGDDEYCDGDEDDDLKKPLKLDETDRFLMTLFFE
NNKMLKRLAENPEYENEKLTKLRNTIMEQYTRTEESARGIIFTKTRQSAYALSQWITE
NEKFAEVGVKAHHLIGAGHSSFFKPMTQNEQKEVISKFRTGKINLLIATTVAEEGLDI
KECNIVIRYGLVTNEIAMVQARGRARADESTYVLVAHSGSGVIEHETVNDFREKMMYK
AIHCVQNMKPEEYAHKILELQMQSIMEKKMKTKRNIAKHYKNNPSLITFLCKNCSVLA
CSGEDIHVIEKGHTVNWTFDEFKELYIVRENKALQKKCADYQINGEIICKCGQAWGTMM
VHKGLDLPCLKIRNFVVVFKNNSTKKQYKKWVELPITFPNLDYSECCLFSDED"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapien:
/mol_type="mRNA"
/db xref="taxon:9606"
/cell_line="HO-1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="MDA5"
169. .3246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene="MDA5"
codon_start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lissue type="melanoma"
                                                                                                                                                                                                                      1.77e-312
5311.00
100.0%
100.0%
100.0%
                                                                                                                                                                                                                                                                                                                                                          x AF095844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens"
                                                                                                                                                                                                                                                                                                                                                          (1-3380)
                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                3380
1025
0
0
0
                                                  ysMetGlu
||||
                                                         140
                                                                                                      120
                                                                                                                             468
                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                228
             160
                                   588
                                                                                528
                                                                                                                                                                          408
                                                                                                                                                                                               80
                                                                                                                                                                                                                       348
                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                   288
                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음 성 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
   음 중
                                              日
                                                             ঠ
                                                                                         밁
                                                                                                          5
                                                                                                                                      ਰ
                                                                                                                                                      8 B
                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                              ર્ફ
                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ર્શ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                        1489
                                                                                                                                                                                     1429
                                                                                                                                                                                                                                                                                                                                                                      1189
                                                                                                                                                                                                                                                                                                                                                                                                                   1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1009
                                                                                                                                                                                                                                  1369
                                                                                                                                                                                                                                                                             1309
                                                                                                                                                                                                                                                                                                                         1249
                                               1609
                                                                                            1549
                                                                                                                                                                                                                                                                                                   381
                                                                                                                                                                                                                                                                                                                                                                                            341
                                                                                                                                                                                                                                                                                                                                                                                                                                         321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                        501
                                                                                                                                                              441
                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                       401
                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                 GTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS
 IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAv
                                                                                                                                                                                     LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAs
                                                                                                                                                                                                                                                                                           LeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLo
                                                                                                                                                                                                                                                                                                                                      ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysG
                                                                                                                                                                                                                                                                                                                                                                                 TyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerGluP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAAGAGCAACTTCTTTCAACCACAGTTCAGCCAAATCTGGAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GATTGCTCAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTG
                                                                                                                                                                                                                                             ProGluValValLysSerCysAspIleIleIleSerThrAlaGlnI
                                                                                                                                                                                                                                                                                                                                                                      TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCAGTGATTCAGGCACCATGGGAAGTGATTCAGATGAAGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAG
                                                                                           TTGAAGAAATGGTATCGTGTTATTGGATTAAGTGGTGATACCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             isAsnSerAsnMet 280
                                                                                                                                                                                                                                                                             euLysIleSerPhe 400
|||||||||||
TGAAAATATCATTT 1368
                                                                                                                                                                                                                                                                                                                                                                                      roGlyLysValIle 360
                                                                                                                                                                                                                                                                                                                                                                                                                                    hrArgValAlaVal 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCCAGCCAGCCTTG 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGCAGCAAGAGCA 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    erGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               spGlyProGlnVal 220
||||||||||||
ATGGTCCTCAAGTG 828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      snTrpPheSerAla 180
||||||||
                                               laThrLysGlnAla 500
|||||||||||||
|CACGAAGCAAGCC 1668
                                                                                                                                                                                                                                                                                                                                                                       CTGGAAAAGTTATA 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      laGlnProAlaLeu 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alAlaAlaArgAla 300
|||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAACAATGGAAAT 648
                                                                                            YSProValllePro 480
                                                                                                                                                                                                                                            leLeuGluAsnSer 420
                                                                                                                                                                                                                                                                                                                                                                                                                    CAGAGTGGCTGTT 1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAATCAGACACA 948
                                                                                                                                                                                      pPheSerLeuIle 440
                                                                                                                                                                                                                                                                                                                         LuPheGlnProPhe 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 luValTrpGlyMet 240
                                                                                                                                        nIleMetArgHis 460
||||||||||
|CATCATGAGGCAT 1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTAACAGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         uLeuThrGlySer 200
                                                                                             1608
                                                                                                                                          1548
                                                                                                                                                                                                                                  1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              768
```

2 2 2 2 2 2 2

В

유정

```
1789
                                                                                                                                                                                                                                     2149
                                                                                                                                                                                                                                                            2089
                                                                                                                                                                                                                                                                                   2029
                                                                                                                                                                                                                                                                                                          1969
                                                                                                                                                                                                                                                                                                                                  1909
                                                                                                                                                                                                                                                                                                                                                         1849
                                                                                                                   2449
                                                                                                                                          2389
                                                                                                                                                                 2329
                                                                                                                                                                                       2269
                                                                                                                                                                                                              2209
                                                                     2569
                                                                                                                                                                                                  701
                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                      641
                                                                                                                                                                                                                                                                                                                                                                  561
                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                       781
                                                                                                                                                     741
                                                                                                                                                                                                                          681
                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                 521
                                                          821
                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                        TrpAlaile
                                                                                                                                                                                                                                                                                                                                                                                                     AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
                                                                                                                                                                                                                                                                                                                                                                               SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThr
                                                                                                                                                                 CTGACCAAATTAAGAAA
                                                                                                                                                                                                                                     AspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhe
                                                                                                                                                                                                                                                                                                                                                         IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                              GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                     LeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArg
                                                                                                                                                                                                              ASPALATYTThYHISLEUGLUThYPheTYYASNGLUGLULYSASPLYSLYSPheAlaVal
                                                                                                                                                                                                                                                                                                                                  TACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGA
                                                                                                                                                     760
                                                                                                                                                                  2388
                                                                                                                                                                                                                2268
                                                                                                                                                                                                                                     2208
                                                                                                                                                                                                                                                  680
                                                                                                                                                                                                                                                             2148
                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                640
                                                                                                                                                                                                                                                                                                            2028
                                                                                                                                                                                                                                                                                                                      620
                                                                                                                                                                                                                                                                                                                                   1968
                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                         1908
                                                                                                                                                                                                                                                                                                                                                                    580
                                                                                                                                                                                                                                                                                                                                                                                1848
                                                                                                                                                                                                                                                                                                                                                                                           560
                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                  960
                                              2688
                                                          840
                                                                                 820
                                                                                             2568
                                                                                                        900
                                                                                                                    2508
                                                                                                                               780
                                                                                                                                           2448
                                                                                                                                                                             740
                                                                                                                                                                                        2328
                                                                                                                                                                                                   720
                                                                                                                                                                                                                           700
                                                                                                                                                                                                                                                                                    2088
```

8 8 8 8 8 8

음 성 음 성

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                  RESULT 5
CS033863
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
                                                                                                                                 Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                               8 8 8 8 8 8 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              청 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유정
          중 음 중
                                                                 ន
                                                                                                                        Score:
                                                                                                                                                                                                                            JOURNAL
                                                                   -09-
                                                                  51
                                                                  ່ທ
                                                                                                                                                                                                                                                                                                                                                                                               3229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   921
                                                                  -363C-2
                             223
                                                                                                                                                                                                                                                                       Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; (
Mammalia; Eutheria; I
Hominidae; Homo.
          21
                                                                                                                                                                                                                 Abbas, A., Cla
Compositions
diseases
Patent: WO 20
Genentech, In
                                                                                                                                                                                                                                                                                                                             CS033863
Sequence 336
CS033863
CS033863.1
                                             μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ValargGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HisVallleGluLysMetHisHisValAsnMetThrProGluPheLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisT
                                                                                                                                                                                                                                                                                                                                                                                                                                  LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerTi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysG.
ArgVallysMetTyrIleGl
                                      MetSerAsnGlyTy
                                                                                                                                                                                                                                                                                                                                                                                                TTTAGTGATGAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                          PheSerAspGluAsp
                                                                  (1-1025)
                                                                                                                                                                                                 : WO 2005016962-A 3369 ;
ech, Inc. (US)
Location/Qualifiers
1. .3434
                                                                                                                                                                                                                                                                                                                                                 3369
                                                                                                                                                                                                                                             Clark, H., ons and met
                                                                                                                                                                   /organism="Homo sapien
/mol_type="unassigned
/db_xref="taxon:9606"
                             nGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS
|||||||||||||||||||||||||
|TGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCT
                                                                                    3.14e-312
5307.00
100.0%
99.9%
99.9%
                                                                                                                                                                                                                                                                                                                               GI:60732714
                                                                                                                                                                                                                                                                                                                                                 from
                                                                  ×
                                                                  CS033863
                                                                                                                                                                                                                                           H., Ouyang, W., Williams, M., methods for the treatment
                                                                                                                                                                                                                                                                                                                                                                                                                1025
                                                                                                                                                                                                                                                                                                                                               3434 bp DNA
Patent WO2005016962
                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebra
Euarchontoglires; Primates;
lnValGluProValLeuAspTyrLeuT
                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                              24-FEB-2005;
                                                                                                                                                                               ne"
DNA"
                                                                                                                                                                                                                                              ,M.P.,
lent of
                                                                                    3434
1024
1
0
0
                                                                                                                                                                                                                                                                                 nta; Euteleostomi;
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hrLysLysGlnTyr 1000
hrPheLeuProAla 40
                              erCysPheArgAla 20
||||||||||||
|CGTGCTTCAGGGCC 282
                                                                                                                                                                                                                                              od, W.I. and Wu, T.D. mune related
                                                                                                                                                                                                                                                                                                                                                                                                                                               erGluCysCysLeu 1020
|||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               leAsnGlyGluIle 960
|||||||||||||
TAAATGGTGAAATC 3048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YrLysAsnAsnPro 900
|||||||||||||
ACAAGAATAACCCA 2868
                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGAATGCTGTTTA 3228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YLeuAspLeuPro 980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAACTTTACATT 2988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'sGluLeuTyrIle 940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGGGAAGATATC 2928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rGlyGluAspIle 920
                                                                                                                                                                                                                                                                                                                                                             PAT 10-MAR-2005
```

B	8 8 8	Q	8 8 8	S B & B	& B &	B 8 B 8	Q D	Q B Q	8 & g
341 TyrileAlaLysAspHisLeuAspLysLysLysLysAlaSerGluProGlyLysValile 360	301 SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeu 320	261 SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnMet 280	241 GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValSerGluSerAspThr 260	763 TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCT 822 201 AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 220 201 AlpCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 220 201 AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 220 823 GATTGCTCAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTGATGGTCCTCAAGTG 882	161 GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla 180	121 LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu 140	463 GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCGCTACATGAACCCTGAGCTCACG 522 101 AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGlnLeuAsnLeu 120	61 LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal 80	283 AGGGTGAAAATGTACATCCAGGTGGAGCCTGTGCTGGACTACCTGACCTTTCTGCCTGC
	· · · · · · · · · · · · · · · · · · ·				_		-		
B & B & B &	}	S & & & &	D QY	Q	B & B &	40 AG	& B & ;	g	D Qy
2323 CTGACCAAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGA 2382 721 GlyllellePheThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrplleThrGlu 740			63 TGGGCCATTCAAATGGAAAAAAAAAGCTGCAAAAGGAAGG	ThrGlnProTyrGluGln 58 	9 6 9	63 CTTCCTCAGATACTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCAAGC	61 TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLysProValllePro 48	421 LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGInLeuSerAspPheSerLeuile 440	ProGluValValLysSerCysAspIleIleIleSerThrAlaGlnIleLeuGluAsnSer 42

```
RESULT 6
CS036676
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
              REFERENCE
AUTHORS
TITLE
                                                                                                                                                              유정유
                                                                                                                                            Ş
                                                                                                                                                                                                      8
                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                              B 5
                                                                                                                                                                                                                                                                                                            음 성 음
                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                       g
                                                                                                                                                                                                                                                                                                                                                                                   중 유
                                                                                                                                                                                                                                                                                                                                                                                                                 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2563
                                                                                                                                                                                                                                                       3043
                                                                                                                                                                                                                                                                                    2983
                                                                                                                                                                                                                                                                                                                 2923
                                                                                                                                                                                                                                                                                                                                             2863
                                                                                                                                                                                                                                                                                                                                                                           2803
                                                                                                                                                                                                                                                                                                                                                                                                       2743
                                                                                                                                                                                                                                                                                                                                                                                                                                    2683
                                                                                                                                                                                                                                                                                                  921
                                                                                                                                                                                                                                                                                                                                                           881
                                                                                                                                                                                                                                                                                                                                                                                         861
                                                                                                                                                                                                                                                                                                                                                                                                                     841
                                                                                                                                                                                                                                                                                                                                                                                                                                                  821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                   Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; C
Mammalia; Eutheria; E
Hominidae; Homo.
Abbas, A., Cla
Compositions
diseases
Patent: WO 20
                                                                                CS036676
Sequence
CS036676
CS036676.
                                                                                                                                                                                                                                                                                                                                                                           GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAAAAATAAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA
                                                                                                                                                                                                                                                      GlyLysIleAsnLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCysLeu
                                                                                                                                                                                                    CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTyr
                                                                                                                                                                                                                        IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                                                                                                                                                    CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATT
                                                                                                                                                                                                                                                                                            HisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                                                 SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle
                                                                                                                                                                                                                                                                                                                                             IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro
                                                                                                                                                                                                                                                                                                                                                                                                        ATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGT
                                                                                                                                                                                                                                                                                                                                                                                                               IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                           PheSerAspGluAsp
                                                                                               6182
                                                                                 ř
               Clark,H., Ouyang,W., Williams,M.I
 2005016962-A
                                                                                 GI:60734150
                                                                                               from
                                                                                                                                   3297
                                                                                                                                                 1025
                                                                                              3434 bp DNA
Patent WO2005016962
                                            Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
             ,M.P.,
               Wood, W.I. and immune related
                                                                                                        TAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               820
                                                                                                                                                                               1020
                                                                                                                                                                                             3222
                                                                                                                                                                                                            1000
                                                                                                                                                                                                                           3162
                                                                                                                                                                                                                                         980
                                                                                                                                                                                                                                                       3102
                                                                                                                                                                                                                                                                                     3042
                                                                                                                                                                                                                                                                                                   940
                                                                                                                                                                                                                                                                                                                  2982
                                                                                                                                                                                                                                                                                                                               920
                                                                                                                                                                                                                                                                                                                                               2922
                                                                                                                                                                                                                                                                                                                                                            900
                                                                                                                                                                                                                                                                                                                                                                                          980
                                                                                                                                                                                                                                                                                                                                                                                                                       860
                                                                                                                                                                                                                                                                                                                                                                                                                                     2742
                                                                                                                                                                                                                                                                                                                                                                                                                                                    840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             800
                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                           2862
                                                                                                                                                                                                                                                                                                                                                                                                        2802
                        D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment & Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                       Š
                                                       8 8 8 8 8
                                                                                                                                                            8 & 8
                                                                                                                                                                                                       유 성
                                                                                                                                                                                                                                   음 중
                                                                                                                                                                                                                                                                  음 상 음
                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                             음 중
                                                                                                                                                                                                                                                                                                                                                        몽
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
  8 8 8 8
                                                                                                                                                                               643
                                                                                                                                                                                             141
                                                                                                                                                                                                                                          523
                                                                                                                                                                                                                                                                      463
                                                                                                                     763
                                                                                                                                    181
                                                                                                                                                                161
                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                   403
                                                                                                                                                                                                                                                                                                                                343
                                                                                                                                                                                                                                                                                                                                                             283
                                                                                                                                                                                                                                                                                                                                                                                           223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scores:
                                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genentech,
                                                                                                                                                                                                                                                                                                                               ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuTi
                                                                                        GluSerGlyValArgGluLeuLeuLy8ArgIleValGlnLy8GluAt
                                                                                                                                                                              GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaG
                                                                                                                                                                                                                    LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAs
                                                                                                                                                                                                                                         AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuG
                                                                                                                                                                                                                                                                      GlualaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAt
                                                                                                                                                                                                                                                                                                                                                                                          MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSt
  GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS
                                                                                                                     LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpTl
                                                            (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Inc. (US)
Location/Qualifiers
j. .3434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                           3.14e-312
5307.00
100.0%
99.9%
99.9%
                                                                                                                                                                                                                                                                                                                                                                                                                       ×
                                                                                                                                                                                                                                                                                                                                                                                                                        CS036676
                                                                                                                                                                                                                                                                                                                                                                                                                       (1-3434)
                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                             AGTTAGAGACGTCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                      0004
                                                                                                                                                                                                                                                                                                                                                                                          SerCysPheArgAla
|||||||||||
rcGTGCTTCAGGGCC
              isAsnSerAsnMet 280
                                        erGluSerAspThr 260
                                                                                                                                                                                                                                                                      snProGluLeuThr 100
                                                                                                                                                                                                                                                                                                                                          etGlnAlaValGlu 60
|||||||||||
                                                                                                                                                                               luAsnAsnGlyAsn 160
|||||||||||
|AAACAATGGAAAT 702
                                                                                                                                                                                                                     3pLy8Cy8MetGlu 140
                                                                                                                                                                                                                                          ACTGCTGAACCTC
                                                                                                                                                                                                                                                    LuValTrpGlyMet 240
                                                                                                                                                                                                                                                                                                   hrArgGluPheVal 80
                               AGAATCAGACACA 1002
                                                                                                                                                                                                                                                                                                                                                                       rPheLeuProAla 40
                                                                                                                               uLeuThrGlySer
                                                                                                                                                   CTÉGTTCTCTGCA 762
                                                                                                                                                           nTrpPheSerAla
                                                                                                                                    200
                                                                                                                                                                 180
                                                                                                                                                                                                                                          582
                                                                                                                                                                                                                                                                                                    462
                                                                                                                                                                                                                                                                                                                                 402
                                                                                                                                                                                                                                                                                                                                                              342
                                                                                                                      822
                                                                                                                                                                                                             642
```

Q Q Q Q	\$ Q D Q	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Q D Q D 5	Q Q D Q Q	B	3
1 AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle 620	61 IleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyThrGlnProTyrGluGln 580	3 AAAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACT 1782 1 VallysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla 540		21 LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeuIle 440	03 GTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTT 1362 81 LeuLysLysTrpTyrArgValileGlyLeuSerGlyAspThrGlnLeuLysIleSerPhe 400 (1 GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaArgAla 300
Qy 961 IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro 980	2983 CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATT 3 2983 CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATT 3 941 ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle 9	881 IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro 900	B3 ĠĠTĊĠĀĠĊĊĀĠĀĠĊTĠĀTĠĀĠĀĠĊĀĊĊTĀĊĠTĊĊTĠĠTTĠĊTĊĀĊĀĠŦĠ	3 GGAAAAATAAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGAAGGTCTGGATATTAAAGAA 2 3 CY9ABNIleVallleArgTYrGlyLeuValThrABnGluIleAlaMetValGlnAlaArg 8 1 CY9ABNIIleVallleArgTYrGlyLeuValThrABnGluIleAlaMetValGlnAlaArg 8 1	2383 ĠĠĀĀTĀĀTĊĪTĪTĀĊĀĀĀĀĀĊĀĊĀĠĀĠĀĠĀĠĀĠĀTĀĀĠĊĠĊĪŤĪĊĊĊĀĠĪĠ 741 AsnGluLysPheAlaGluValGlyValLysAlaHisHisLeuIleGlyAla 	Qy 641 IleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAspGlu 660

Qy 101 AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGlnLeuLeuAsnLeu 120	#TipeGluGInIIEGINAR 	1 MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla 2	ilar Simi	Genentech, Inc. (US) RES Location/Qualifiers source 13434 /organism="Homo sapiens" /mol_type="unassigned DNA" /db_xref="taxon:9606"	Homo sapiens (human) Homo sapiens Eukaryota; Metazoa; Chordata; Crania Eukaryota; Eutheria; Euarchontoglires Hominidae; Homo. 1 Abbas, A., Clark, H., Ouyang, W., Willi Compositions and methods for the tre diseases	042815 quence 3369 042815 042815.1 G	
461 TyrleuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLys 461 TyrleuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLys	423 CCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCC 148 421 LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeuIle 440	3 GTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTT 1 1 LeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSerPhe 4 1	321 GluGlyLysAsmIleIleCysLeuProThrGlySerGlyLy	281 GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaArgAla 3	_	63 TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTC 01 AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGln	1 GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla 1

_	nAsnPro 900	881 IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsı
Q	òo i	3 GTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGAT
	nser 880	861 ValGlnAsnMetLvsProGluGluTvrAlaHisLvsIleLeuGluLeuGlnt
о с	eHisCys 860 TACATTGT 2802	841 IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIlo
י ש טִ ט	rGlyVal 840 AGGAGTT 2742	821 GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
ע ט ט ט	nAlaArg 820 GGCCCGT 2682	801 CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
0	leLysGlu 800	781 GlyLysIleAsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAspIlo
12]	eArgThr 780 TCGCACT 2562	761 SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThr
	yHisSer 760 aCACAGC 2502	741 AsnGluLysPheAlaGluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHisSer
.	eThrGlu 740 TACTGAA 2442	721 GlyIleIlePheThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThrGlu
ω×<)	SerAlaArg 720 CAGCACGA 2382	701 LeuThrLysLeuArgAsnThrlleMetGluGlnTyrThrArgThrGluGluSe:
, סרט	nGluLys 700 TGAAAAG 2322	681 PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLy
d D k	rLeuPhe 680 TTATTT 2262	661 AspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhe
	uAspGlu 660 AGATGAG 2202	641 IleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAspGlu
) U K	eAlaVal 640 TGCAGTC 2142	621 AspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAlaVal
	gMetIle 620 AATGATA 2082	601 AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
	gValCys 600 GTTTGT 2022	581 TrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsnArgLysGluArgValCys
	rGluGln 580 TGAACAA 1962	561 IleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyThrGlnProTyrGl
	tThrArg 560 GACAAGG 1902	541 IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetTh
	sPheAla 540 GTTTGCC 1842	521 VallysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheA

유 성

д

5

음 중

음 성 음 성

음 성

유

음 중 음 장

ş

음 성 음 성

유 8 8 8 8 8 8 8 8 8 8 8 8 8

```
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                        RESULT 8
CS045628
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                             Alignment S
Pred. No.:
                               유 성
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8 8 8 8 8
            ्रञ्
                                                                           Š
                                                                                                                                                                                                                 FEATURES
source
                                                                                                                                                                                                                                                                                                                                                                                                                        용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ठ
                                                                            -09-
                                                                                                                                                                                                                                             JOURNAL
                                                                            -515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2863
                                                                                                                                                                                                                                                                                                                                                                                                                        3283
                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   941
283
                                      223
                                                                                                                                                        Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          921
                                                                                                                                                                                                                                                                                                   Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; (
Mammalia; Eutheria; E
                  21
                                                                                                                                                                                                                                                                                                                                                   CS045628
Sequence
CS045628
CS045628.
                                                                                                                                                                                                                                    Genentech,
                                                                                                                                                                                                                                                       Abbas, A., Clark, F
Compositions and
diseases
                                                                                                                                                                                                                                             Patent:
                                                                                                                                                                                                                                                                                              Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                      PheSerAspGluAsp
ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuT
                                      MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HisVallleGluLysMetHisHisValAsnMetThrProGluPheLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTAAGAGAAAACAAAGCACTGCAAAAGAAGTGTGCCGACTATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCACTAATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTT
                                                                            (1-1025)
                                                                                                                                                                                                                                    WO 2005019258-A
                                                                                                                                                                                                                                                                                                                                                      ï
                                                                                                                                                                                                                                                                                                                                                                      6182
                                                                                                                                                                                                                , Inc. (US)
Location/Qualifiers
1. .3434
                                                                                                                                                                                   /organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                Clark,H., Ouyang,W., Williams,P.M., ons and methods for the treatment of
                                                                                                      3.14e-312
5307.00
100.0%
99.9%
99.9%
                                                                                                                                                                                                                                                                                                                                                      GI:61851939
                                                                                                                                                                                                                                                                                                                                                                        from
                                                                            ×
                                                                            CS045628
                                                                                                                                                                                                                                                                                                                                                                                                                                          1025
                                                                                                                                                                                                                                                                                                                                                                         3434 bp DNA
Patent WO2005019258
                                                                                                                                                                                                                                                                                                      Chordata; Craniata; Vertebra
Buarchontoglires; Primates;
                                                                                                                                                                                                                                             6182
                                                                           (1-3434)
                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                             03-MAR-2005;
                                                                                               3434
1024
1
0
0
                                                                                                                                                                                                                                                                 Wood, W.I. and Wu, T.D. immune related
                                                                                                                                                                                                                                                                                                      ata; Euteleostomi;
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SlyLeuAspLeuPro 980
             hrPheLeuProAla 40
                                      erCysPheArgAla 20
|||||||||||
|CGTGCTTCAGGGCC 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGAATGCTGTTTA 3282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              erGluCysCysLeu 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAAGAAACAATAC 3222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hrLysLysGlnTyr 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               leAsnGlyGluIle 960
||||||||||||
|TAAATGGTGAAATC 3102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YSGluLeuTYrIle 940
||||||||||
AGGAACTTTACATT 3042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       erGlyGluAspIle 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTTTCTGCCTGCA 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ĊŢĠĠĠĠĀĀĠĀŢĀŢĊ 2982
                                                                                                                                                                                                                                                                                                                                                                                   PAT 22-MAR-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2922
```

da Vo	P	& B	8 8	B &	D Q	β Q	\$ Q	g 49	g &	₽ &	Db Qy	р <i>Q</i>	P 6	dg VQ	<u> </u>	gb Qy	Qy da	
TICTIGICAAIAAGGIACIGCIAGIIGAACAGCICIICCGCAAGGAGIICCAACCA euLygLygTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLygIleSer 	43 TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAGTTATA 13 61 ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPhe 38 61 ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPhe 38	83 GAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAACCAGAGTGGCTGTT 12 41 TyrileAlaLysAspHisLeuAspLysLysLysLysAlaSerGluProGlyLysVallile 36	21 GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysThrArgValAlaVal 34	301 SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeu 320 	281 GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaArgAla 300 	261 SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnMet 280	241 GluasnasnSerSerGluSerSerPhealaaspSerSerValValSerGluSerAspThr 260	221 GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGlyMet 240	201 ABPCYSSETGIUSETÄSNÄJAGIUIIEGIUABNLEUSETGINVAJASPGIYPTOGINVAJ 220 	181 PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySer 200	161 GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla 180 	141 GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaGluAsnAsnGlyAsn 160 	121 LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu 140	101 AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGlnLeuLeuAsnLeu 120	81 GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr 100	61 LeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal 80	41 GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu 60 	
Q B Q	ОУ	Db Qy	Qy db	gb Q	}	₽ !	S B :	S B 7	S B 8	D	₽ #	S B 2	S B 7	ð B 1	ov D	S S	& B &	,
741 ABNGluLyBPheAlaGluValGlyValLyBAlaHiBHiBLeUIleGlyAlaGlyHiBSer 760	eIlePheThrLysThrArgGlnSerAlaTyrAlaLeuSerGln' 	701 LeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArg 720 	681 PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys 700 	61 ABPABPLEULYBLYBETOLEULYBLEUMSPGIDINIASPATGFNELEUWECINILEGENE G 	TITLE TO THE PROPERTY OF THE P							THE TEACH OF THE PROOF OF THE TAXABLE PROOF OF THE TAXABLE PROOF OF TAXABL					Vally85erCy8ABp11e11e11e5er1nrA1dg1n11e1eug1uAb15er	*

```
AX300832
LOCUS
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                         REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                               3283
                                                                                                                                                                                                                                                                                                                                            1001
                                                                                                                                                                                                                                                                                                                    3223
                                                                                                                                                                                                                                                                                                                                                                          3163
                                                                                                                                                                                                                                                                                                                                                                                                                               3103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   801
                                                                                                                                                                                                                                                                                                                                                                                                   981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                 AX300832
Sequence
AX300832
AX300832.
Bahr, G., Cocude, C. and Capron, A. Rh116 polypeptides and its fragments and said polypeptides and therapeutic uses Patent: WO 0185955-A 1 15-NOV-2001; Istac (FR); INSTITUT PASTEUR DE LILLE (FR)
                                                                                                                         Homo
                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                    Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAAAAATAAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA
                                                                                                                                                                                                                                                                           PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                  LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCysLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                           IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCACTAATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGGAAGATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetGlnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyLysIleAsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTAGTGATGAGGAT
                                                                                                                                                                                                                                                                                                                   AAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCCAGAATTCAAGGAACTTTACATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGT
                                                                                                                                                                                                                                                                                                                                                                           TGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATAC
                                                                                                                                                                                                                                                                                                                                                                                        /sLeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTyr
                                                                                                                         sapiens
                                                                                                                                       sapiens (human)
                                                                                                                                                                                           سر
                                                                                                                                                                    μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGT
                                                                                                                                                                                           from
                                                                                                                                                                   GI:17382110
                                                                                                                                                                                                                                                                                                                                                                                                                                TGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCT
                                                                                                                                                                                           Patent
                                                                                                                                                                                                                                                               3297
                                                                                                                                                                                                                                                                                       1025
                                                                                             Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                            3372 bp
WO0185955.
   LILLE (FR)
                                                                                                                                                                                                          DNA
                                         polynucleotides
                                                                                                                                                                                                           PAT
                                                                                                                                                                                                           16-APR-
                                         encoding
                                                                                                                                                                                                                                                                                                                     3282
                                                                                                                                                                                                                                                                                                                                              1020
                                                                                                                                                                                                                                                                                                                                                                          3222
                                                                                                                                                                                                                                                                                                                                                                                                    1000
                                                                                                                                                                                                                                                                                                                                                                                                                               3162
                                                                                                                                                                                                                                                                                                                                                                                                                                                         980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
DB:
                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred.
                                                  ঠ
                                                                                   B
                                                                                                    S
                                                                                                                             뮍
                                                                                                                                                          8
                                                                                                                                                                                           밁
                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Хо
::
                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                              121
                                                                                                                                        455
                                                                                                                                                                                             395
                                                                                                                                                                                                                                                  335
                                                                                                                                                                                                                                                                                                       275
                                                                                                                                                                                                                                                                                                                                                              215
                                                                                                                                                                                                                                                                                                                                                                                                                    155
                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                 41
                                                                                                                                                                                                                                                                                                                                                                                       21
                                                                                                                                                                                                                                                                                                                                                                                                                                             \vdash
                                                                                                                                                                                                                                                 LeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpTi
                                                                                                                                                                                                                                                                                                      MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS.
   GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluA
                                              LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuA
                                                                                                                                                       AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuG
                                                                                                                                                                                                                                                                                                                                                              GACTTGCCCTCTCCATCGTTTGAGAACGCTCATGATGAATATCTCC
                                                                                                                                                                                               GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGA
                                                                                                                                                                                                                GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /protein_id="CAD13049.1"
/protein_id="CAD13049.1"
/db_xref="GI:17382111"
/db_xref="GI:17382111"
/db_xref="GI:17382111"
/crount-id="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE
/translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE
QIQRTVATSGNMQAVELLLSTLEKGVWHLGWTREFVEALRRTGSPLAARYMNPELTDL
PSPSFENAHDEYLQLLNLLQPTLVDKLLVRDVLDKCMEEELLTIEDRNRIAAAENNGN
ESGVRELLKRIVQKENWFSAFLNVLRQTGNNELVQELTGSDCSESNAEIENLSQVDGP
QVEEQLLSTTVQPNLEKEVWGMENNSSESSFADSSVVSGSDTSLAEGSVSCLDESLGH
NSNMGSDSGTMGSDSDEENVAARASPEPELQLRPYQMEVAQPALEGKNIIICLPTGSG
KTRVAVYIAKDHLDKKKKAASBPGKVIVLVNKVLLVBQLFRKEFPGFLKKWYRVIGLSG
DTQLKISFPEVVKSCDIIISTAQILENSLLNLENGEDAGVQLSDFSFIIIDECHHTNK
EAVYNNIMRHYLMQKLKNNRLKKENKFVIPLPQILGLTASPGVGGATKQAKAEEHILK
LCANLDAFTIKTVKENLDQLKNQIQEPCKKFAIADATREDPFKEKLLEIMTRIQTYCQ
MSPMSDFGTQPYEQWAIQMEKKAAKEGNRKESVCAEHLRKYNKALQINDTIRMIDAYT
HLETFYNEEKDKKFAVIEDDSDEGGDDEYCDGDEDEDLKKPLKLDETDRFLMTLFFE
NNKMLKRLAENPEYENEKLTKLRNTIMEQYTRTEESARGIIFTKTRQSAYALSQWITE
NEKFAEVGVKAHHLIGAGHSSEFKPMTQNEQKEVISKFRTGKINLLIATTVAEEGLDI
KECNIVIRYGLTUNEIAMVQARGRARADESTYVLVAHSGSGVIERETVNDFREKMYK
AIHCVQNMKPEEYAHKILELQMQSIMEKKMKTKRNIAKHYKNNPSLITFLCKNCSVLA
CSGEDIHVIEKMHVMTPEFKELYIVRENKALQKKCADYQINGEIICKCGQAWGTMM
VHKGLDLPCLKIRNFVVVFKNNSTKKQYKKWVELPITFPNLDYSECCLFSDED"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
1. .3372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        organism="Homo sapiens"
/mol_type="unassigned DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note="unnamed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.64e-311
5285.00
99.7%
99.5%
99.5%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX300832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (1-3372)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3372
1020
2
3
0
      snTrpPheSerAla 180
                                                                                                                                                                                                                                                                     hrArgGluPheVal
                                                                                                                                                                                                                                                                                                                            etGlnAlaValGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                  erCysPheArgAla
                                                                                                                                                                                                                                                                                                         GCAGGCAGTTGAA
                                                         uAsnAsnGlyAsn
                                                                                                                                                                     nLeuLeuAsnLeu
                                                                                                                                                                                                                                                     TCGGGAATTCGTG
                                                                                                              рLувСувмеtGlu
                                                                                                                                           ACTGCTGAACCTC
                                                                                                                                                                                                 CCCTGAGCTCACG
                                                                                                                                                                                                               nProGluLeuThr
                                                          160
                                 634
                                                                                                                140
                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                         40
                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                      574
                                                                                                                                          514
                                                                                                                                                                                                454
                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                   394
                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                          334
                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                274
                                                                                                                                                                                                                                                                                                                                                                                                                     214
```

Q	φ φ	D Qy	g &	β Q	용 성	dg VQ	상	D Q	dg VQ	D Q	φ 4 9	8 8	Qy db	B 8	8 8	p Q	dg VQ	Db
521 ValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla 540 	501 LysalaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPheThrIleLysThr 520 	481 LeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThrLy8GlnAla 500 	461 TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLysProValllePro 480 	1 IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAsnIleMetArgF 	421 LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeuIle 440 	401 ProGluValLysSerCysAspIleIleIleSerThrAlaGlnIleLeuGluAsnSer 420 1355 CCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAATCCTTGAAAACTCC 1414	381 LeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSerPhe 400 1295 TTGAAGAAATGGTATCGTGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATTT 1354	361 ValleuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPhe 380 	41 TYrIleAlaLY8AspHisLeuAspLysLysLysLysAlaSerGluProGlyLysValIle 	21 GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysThrArgValAlaVal 34 	301 SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeu 320 	281 GlySerABpSerGlyThrMetGlySerABpSerABpGluGluABnValAlaAlaArgAla 300 	61 SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnMet 28 	241 GluasnasnSerSerGluSerSerPheAlaAspSerSerValValSerGluSerAspThr 260 	221 GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGlyMet 240 	201 AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 220 	181 PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySer 200 	
- S		OV DB 1	S B 8	S B 8	D 49	2 p 2	מ מ	D &	S B 1	O B 4		S B 4	O D 4	5 B 4	S B 4	Q D 5	O B 1	OV B
2795 ATAATGGAAAAGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCA 2	2735 GTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAAT		841 IleGluHisGluThrvalAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys 8	801 CysAgnIleValIleArgTyrGlyLeuValThrAsnGluileArgTyrGlyLeuValThrAsnGluileArgTyrGlyLeuValThrAsnGluileArgTyrGlyLeuValThrAsnGluileArgTyrGlyCeuTyrGlyCeuTyrGlyCeuTyrGlyCeuTyrGlyCeuTyrGlyCeuTyrGlyArgAlaNaTAGC	2495 GGAAAAATAAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA 2	2435 AGTGAGTTCAAACCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACT	2375 AATGAAAAATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGC 2			701 LeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArg 7	2135 GATGATTIAAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTT 2	2075 ATAGAAGATGATAGTGATGAGGGTGGTGATGAGTATTGTGATGGTGATGA	2015 GATGCGTATACTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTC 2	1955 GCAGAACATTTGAGGAAGTACAATAAAGGCCCTACAAATTAATGACACAATTCGAATGATA 2	1895 TGGGCCATTCAAATGGAAAAAAAAACCTGCAAAAGAAGGAAATCGCAAAGAAAG			1715 GTTAAAGAAAACCTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAA 541 IleAlaAspAlaThrArqGluAspProPheLysGluLysLeuLeuGluIleMe

っ

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
AY017378
LOCUS
DEFINITION
                                                                                                                                                                                                              JOURNAL REFERENCE
                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                        FEATURES
                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                            Sgo
                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cds.
AY017378
AY017378.
                                                                                                                                                                                                                                                                                    Cocude, C., Truong, M.-J., Billaut-Mulot, O., Delsart, V., Darcissac, E., Capron, A., Mouton, Y. and Bahr, G.M.
A novel cellular RNA helicase, RH116, differentially regulates growth, programmed cell death and human immunodeficiency virus 1 replication
J. Gen. Virol. 84 (12), 3215-3225 (2003)
2 (bases 1 to 3373)
                                                                                                                                                                                                                                               Cocude, C., Kolesnitchenko, V., Capron, A. and Bahr, G.M. Identification of a new RNA h
                                                                                                                      Submitted (09-JAN-2001) Laboratoire d'Immunologie Moleculaire
l'Infection et de l'Inflammation, Institut Pasteur de Lille, 1
du Professeur Calmette BP 245, Lille 59019, France
Location/Qualifiers
                                                                                                                                                                                 Unpublished
3 (bases 1 to 3373)
Cocude, C., Kolesnitchenko, V.,
Capron, A. and Bahr, G.M.
                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AY017378
Homo sapiens
                                                                                                                                                                                                                                     immunomodulator Murabutide
                                                                                                                                                                                                                                                                                                                                                                                        Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                        Direct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HisValIleGluLysMetHisHisValAsnMetThrProGluPheLy8GluLeuTyrIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTAGTGATGAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LYSLYSTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCysLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 3373)
                                                                                                                                                                      Submission
                                                                    /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
          /codon_start=1
/product="RNA helicase-DEAD
/protein_id="AAG54076.1"
/db_xref="GI:12621066"
translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:12621065
                                                                                                                                                                                                                                                                                                                                                                                                                                         (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3373 b<sub>1</sub>
RNA helicase-DEAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3229
                                                                                                                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTGGTTTTCAAAAATAATTCAACAAAGAAACAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               xod n
                                                                                                                                                                                                                                                   helicase (RH116)
                                                                                                                                                                                                                                                                         Billaut-Mulot, O.,
                                                                                                                                                                                                 Billaut-Mulot, O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
protein
                                   box protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear PR
RH116 mRNA,
                                                                                                                                                                                                                                                 regulated
                                                                                                                                                                                                Truong, M. -J.,
                                                                                                                                                                                                                                                                         Truong,
                                     RH116'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGAAGATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRI
                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                          М.-J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28-NOV-2003
                                                                                                                                                                                                                                                   the
                                                                                                                                             ۲
                                                                                                                                                de
de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2914
                                                                                                                                                                                                                                                                                                                                         cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  920
                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                           5
                                                                         밁
                                                                                            Ş
                                                                                                                      밁
                                                                                                                                              Ş
                                                                                                                                                                        B
                                                                                                                                                                                           5
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                           Б
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                          455
                                                                                                                                                                                                  101
                                                                                                                                                                                                                           395
                                                                                                                                                                                                                                                                            335
                                                161
                                                                                                 141
                                                                                                                         515
                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                             275
                                                                                                                                                                                                                                                                                                                                                                               215
                                                                                                                                                                                                                                                                                                                                                                                                                                155
                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                       \vdash
```

US-09-515-363C-2 (1-1025) x AY017378 GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluA ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaG LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetA LeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpT GAGG PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGG GACTTGCCCTCTCCATCGTTTGAGAACGCTCATGATGAATATCTCC AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuG GAGGCCC ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCT CTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAG CCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGA **rGGAGCCTGTGCTGGACTACCTGA** (1-3373)snTrpPheSerAla snProGluLeuThr hrArgGluPheVal erCysPheArgAla ||||||| luLeuThrGlySer 200 AAAACAATGGAAAT ACCCTGAGCTCACG CTCGGGAATTCGTG uAsnAsnGlyAsn ACTECTGAACCTC nLeuLeuAsnLeu CTTTCTGCCTGCA TAAGTGCATGGAG 180 140 40 100 394 334 694 634 160 574 514 120 454 90 60 274 214 20

Ş	Db	8 8	\$ 8	유 성	90 40	д Q	d d	유 성	do Vo	D Q	8 8	8 8	B 8	B &	B &	용 성	B &	g Q	DЪ
1 IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArg 56		5 жжавствальная дейская праводельной праводельной праводельной праводельной праводельной праводельной праводел 1 ValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysLysPheAla 5	LysalaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPheThrIleLysThr 52	L 10	1 TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLysProValllePro	441 IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAsnIleMetArgHis 460 	21 LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeuIle 4 	401 ProGluValValLy8SerCy8AspIleIleIleSerThrAlaGlnIleLeuGluAsnSer 420 	381 LeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSerPhe 400 	lnProPhe 3 AACCATTT 1	TYrīleAlaLysAspHisLeuAspLysLysLysLysAlaSerGluProGlyLysValIle 3	GluGlyLy8AsnIleIleCleCy8LeuProThrGlySerGlyLy8ThrArgValAlaVal 3 	SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeu	1 GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAla/ 	261 SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnMet 280 	1 GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValSerGluSerAspThr 2 	1 GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGlyMet 2	1 AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal	
QQ 43	§ §	, Q	B &	B 1	S B &) B :	Q B 1	S B 1	S B .	Q B !	S B &	S & &	2 B 4	S B &	S B 7	o b	Q Db	Q B	ο p
TCACTAATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATC 29	95 ATAATGGAAAAGAAAATGAAAACCAAGAGAAAATATTGCCAAGCATTACAAGAATAACCC 01 SerLeuIleThrPheLeuCvsLvsAsnCvsSerValLeuAlaCvsSerGlyGluAspIl	881 IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro 900	FINITIAL PROPERTY OF THE PROPE									1	35 GATGATTTAAAGAAACCTTTGAAACTGGATGAAACAGATAGAT			GCAGAACATTTGAGGAAGTACAATAAGGCCCTACAAATTAATGACAC AspAlaTvrThrHisLeuGluThrPheTvrAsnGluGluLvsAspLv	95 TGGGCCATTCAAATGGAAAAAAAAGCTGCAAAAGAAGGAAATCGCAAAAGAAAG		75 ATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATG <i>I</i> 61 IleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyThrGlnProTyrC

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                      JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 11
AY075132
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                         SdC
                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (house mouse;
Mus musculus
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eut
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eut
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
Mammalia; Muroidea; Muridae; Murinae; Mus.
Sciurognathi; Muroidea; Muridae; Mus.
                                                                                                                                                                                                                                                                                                                                                        Direct Sub
Submitted
                                                                                                                                                                                                                                                                                                                                                                                                              and Tschopp, J.

Overexpression of Helicard, a CARD-Containing during Apoptosis, Accelerates DNA Degradation Curr. Biol. 12 (10), 838-843 (2002) 12015121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AY075132 3070
Mus musculus HELICARD mRNA,
AY075132
AY075132.1 GI:18698980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 3078)
KOVACSOVICS,M., Martinon,F., Micheau,O.,
                                                                                                                                                                                                                                                                                                                                                                                    Kovacsovics, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCysLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATGTAATTGAGAAAATGCATCACGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to
                                                                                                                                                                                                                                                                                                                                        ect Submission
nitted (24-JAN-2002) Biochemistry, U
Boveresses 155, Epalinges, VD 1066,
/product = "HELICARD"

/product = "HELICARD"

/product = "HELICARD"

/product = "HELICARD"

/protein id="AAL77205.1"

/protein id="AAL77205.1"

/db xref="GI:18698981"

/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE

QILKKINTCGNTSAAELLLSTLEQGQWPLGWTQMFVEALEHSGNPLAARYVKPTLTDL

PSPSSETAHDECLHLTTLLQPTLVDKLLINDVLDTCFEKGLLTVEDRNRISAAGNSGN

ESGVRELLRRIVQKENWFSTFLDVLRQTGNDALFQELTGGGCPEDNTDLANSSHRDGP

AANECLLPAVDESSLETEAWNVDDILPEASCTDSSVTTESDTSLAEGSVSCFDESLGH

NSNMGRDSGTMGSDSDESVIQTKRVSPEPELQLRPYQMEVAQPALDGKNIIICLPTGS

GKTRVAVYITKDHLDKKKQASEGGKVIVLVNKVMLAEQLFRKEFNPYLKKWYRIIGLS

GDTQLKISFPEVVKSYDVIISTAQILENSLLNLESGDDDGVQLSDFSLIIIDECHHTN

KEAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPQILGLTASPGVGAAKKQSEAEKHIL

NICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLEIMASIQTYC

QKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEALQINDTIRMIDAY

SHLETFYTDEKEKKFAVLNDSDKSDDEASSCNDQLKGDVKKSLKLDETDEFLMNLFFD

NKKMLKKLAENPKYENEKLIKLRNTILEQFTRSEESSRGIIFTKTRQSTYALSQWIME
                                                                                                                                                                                                                                                             /organism="Mus musculus"
/mol_type="mRNA"
/db_xref="taxon:10090"
                                                                                                                                                                                                                            'note="helicase;
'codon_start=1
                                                                                                                                                                                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                         . .3078
                                                                                                                                                                                                                                                                                                             . .3078
                                                                                                                                                                                                                                                                                                                                                                                                  3078)
                                                                                                                                                                                                                                                                                                                                                                                    Hofmann, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3078
                                                                                                                                                                                                                                           contains
                                                                                                                                                                                                                                                                                                                                                                                    and Tschopp, J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g bp mRNA complete cds.
                                                                                                                                                                                                                                           two
                                                                                                                                                                                                                                                                                                                                           University of 5, Switzerland
                                                                                                                                                                                                                                            CARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bodmer, J.L.,
                                                                                                                                                                                                                                            domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Helicase
                                                                                                                                                                                                                                                                                                                                                        Lausanne,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ROD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hofmann, K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cleaved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-MAY-2002
                                                                                                                                                                                                                                                                                                                                                         5
C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3094
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best L
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                     밁
                                                                                                                                                    S
                                                                                                                                                                                    ద
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                    뮍
                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                    5
                                                                       밁
                                                                                       ঠ
                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No . .
                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                              661
                                                                                                                                                                                     601
                                                                                                                                                                                                                201
                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                              161
                                                                                                                                                                                                                                                                                                                                                                                    141
                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAT
```

NAKFAEVGVKAHHLIGAGHSSEVKPMTQTEQKEVISKFRTGBINLLIATTVAEEGLDI KECNIVIRYGLVTNEIAMVQARGRARADESTYVLVTSSGSGVTEREIVNDFREKMMYK AINRVQNMKPEEYAHKILELQVQSILEKKMKVKRSIAKQYNDNPSLITLLCKNCSMLV CSGENIHVIEKMHHVNMTPEFKGLYIVRENKALQKKFADYQTNGEIICKCGQAWGTMM VHKGLDLPCLKIRNFVVNFKNNSPKKQYKKWVELPIRFPDLDYSEYCLYSDED"

US-09-515-363C-2 (1-1025) x AY075132 GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS:::::: AATGAGTGTCTTCTGCCTGCTGTCGATGAGTCAAGTCTGGAGACAG GAGTCAGGTGTAAGAGAGCTGCTGAGAAGGATTGTGCAGAAGGAAA LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuA GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnM ATGTCGATTGTCTGCAGAGGACAGCTTCAGGAATCTCATCT SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyH GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG GGCTGCCCAGAAGACACAGACTTGGCTAACTCGTCTCACAGAG AspCysSerGluSerAspAlaGluIleGluAspLeuSerGlnValA PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG GAAACCAAAGAGCAGATTCTTAAAAAAGATCAACACCTGTGGTAACA MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS |||||| TTCCTGGATGTTCTGCGCCAAACT GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluA AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuG 3.78e-245 4199.00 87.0% 79.7% 79.1% TTTGGTGGACAAACTTCTGATTAACGATGTCTTGG **ĊĊTCTĠĂĠĂCTĠĊĊĊĂTĠĂ** (1-3078)Length: Matches: Conservative: Mismatches: Indels: ĠĠĀĀĀTGATGCĀČTĀTTCĊĀĀĠ*I* Gaps: ĊĠĀĠŦĠŦĊŤĊĊĄĊŤŤĠĊŤĠĄĊĊĊŤĊ 3078 818 75 131 2 lisAsnSerAsnMet erGluSerAspThr ::|||||||| luLeuThrGlySer 200 luAsnAsnGlyAsn ACACTTGCTTCGAG lnLeuLeuAsnLeu TATTCTTCAGGCCC 60 erCysPheArgAla 20 |||||| вршувсувметсіц CGCAGATGTTCGTG hrArgGluPheVal CCAGCGCGCAGAA etGlnAlaValGlu GCCTGGAACGTA .uValTrpGlyMet TEGECCTECAGCT ACTAACAGGTGGA 600 pGlyProGlnVal 220 |||||| CTGGTTTTCTACC nTrpPheSerAla 280 720 240 660 180 100 60 540 480 120 180 120 840 260 160 420 140 08 780 360 300 240

	1 GlySerAspSerGlyThrMetGlySerAspSe
2038 700 2098 72098 2158 740 2218 2218 2218 22218 22218 22278 22338 860 22578 860 22578 860 22578 920 22578 920 22578 920 22578 920 22578 920 22578 920 22578	::: :::

QY 121 LeuGInProThrLeuValAspLySLeuLeuValArgAspValLeuAspLySCysMetGiu 140 :::	101 AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGlnLeuAsnLeu 12	Db 415 CTGCTGCTĞAĞCĀĆCTTĞGAĞCAGĞĞACAATĞGCCTCTĞĞĞATĞĞACĞCAGATGTTCĞTĞ 474 Oy 81 GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr 100 ::: :::	41 GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu 60 ::: :::		<pre>y Match: 79.0% Indels: 6</pre>	ores: 9.39e-245 4194.00 larity: 86.9% imilarity: 79.6%	ource	Methods of testing for bronchial asthma or chronic obstructive pulmonary disease Patent: EP 1394274-A 1065 03-MAR-2004; Genox Research, Inc. (JP) Location/Qualifiers	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia; Sciurognathi; Muroidea; Muridae; Murinae; Mus. 1 Ohtani N Sucita V Vamava M Kubo H Nacai H and Trubar	CQ77 CION Sequ CO77 O CQ77 O CQ77 N CQ77 N CQ77 N CQ77 N CQ77 SS .	1020 LeuPheSerAspGluAsp 1025 ::: 3058 TTGTATAGTGATGAAGAT 3075 SULT 12 777379	Db 2998 TACAAGAAGTGGGTGGAATTGCCTATCAGATTTCCTGATCTTGACTACTCAGAATACTGC 3057
Db 1675 CCCCTGCCGCAGATACTAGACCTGACAGCTTCACCTGGTGTTGGAGCAGCAAAAAAGCAG 1734 Qy 500 AlaLysAlaGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPheThrIleLys 519 ::::: :::	isTyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLy ::: GATATTTGAAGCAGAAGCTGAGAAACAATGACCTCAAGAAACAAAACAA roLeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAl	440 Il 	Qy 400 PheProGluValValLysSerCysAspIleIleSerThrAlaGlnIleLeuGluAsn 419		Qy 340 ValTyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerGluProGlyLysVal 359	Qy 320 LeuGluGlyLyBAsnIleIleIleCysLeuProThrGlySerGlyLyBThrArgValAla 339	Db 1075 GGCAGGATTCAGGCACCATGGGAAGTGATTCAGATGAAAGTGTCATCCAGACAAAAAGA 1134 Qy 300 AlaSerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAla 319	Qy 261 SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnMet 280	241 GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValSerGluSerAspThr :::::: :::	Qy 201 AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 220		Qy 161 GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla 180

	880 SerileMetGluLy8Ly8MetLy8ThrLy8ArgAsnIleAlaLy8HisTyrLy8AsnAsn 899 :::	Ś
	ω -	8 8
	52 GTTACCGAACGGGAGATTGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATTA	용
	840 ValIleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHis 85	· 8
	2692 CGGGGTCGAGCCAGAAGCATGAAAGCACGTATGTCCTGGTCACCAGCAGTGGCTCAGGA 2751	B &
CDS	32 GAGTGCAATATTGTTATTCGTTATGGCCTTGTCACGAACGA	}
	800 GluCysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAla 81	Q Y
FEATURES FEATURES	780 ThrGlyLysIleAsnLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLys 799 :::	B 8
REFERENCE 2 (AUTHORS Kang TITLE Dire		Db
JOURNAL Unpu	rGluPhelvsProMetThrGlnAsnGluGlnLvsGluVallleSerLvsPheArg 77	0 5
REFERENCE 1 (AUTHORS Kang	740 GluAsnGluLysPheAlaGluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHis	\$ 8
Mamm	2392 CGAGGAATTATTTTTACAAAAACACGACAGAGCACCTACGCACTTTCCCAGTGGATCATG 2451	B
ORGANISM Mus	gGlyIleIlePheThrLysThrArgGlnSerAlaTyrAlaLeuS	ફ
ACCESSION ĀF37 VERSION ĀF37 KEYWORDS .	700 LysLeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAla 719 	당 성
¥	72 TTCTTTGATAACAAGAAAATGTTGAAAAACTAGCTGAAAACCCAAAATACGAGAATGAA 23	B 4
RESULT 13 AF374384	WARAAAICTIIGAAACIGGACGAAACGGAIGAAIIICICAIGAAIII 22 WARNLYBMEtLeuLYBARGLEWAlaGluAsnProGluTyrGluAsnGlu 69	S 8
Db 3292 TT	660 GluAspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeu ::: :::	\$ 5
Оу 1020 Le	55 GTCCTCAATGACAGCGACAAGAGTGATGACGAGGCCAGCAGTTGCAATGACCAACTT 22	D _D
3232	640 VallleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAsp 65	Ş
ΟΣ 1000 ΤΥ		ర్థ
3.50	eAgpAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAl	Ş
3112		문 5
Qy 960 Il	/3 CAGIGGGCCAIICAAAIGGAGAAAAAAGCIGCIAAAAGACGAAAAICGCAAAAAACACGGCC 20	5 5
Db 3052 AT	2 8	\$ 8
Qy 940 Il	15 AGCATTCAGACTTACTGCCAAAAAAGTCCAATGTCAGATTTTGGAACCCAACATTATGAG 19	밁
2992	560 ArgIleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyThrGlnProTyrGlu 57	8
920	TTGCTGATGACACCAGAGAAATCCATTTAAAGAGAAACTTCTAGAAATTATGGCA 1	Db
Db 2932 CC	540 AlaileAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThr 559	Ş
2872		D _D

```
Apulation/Qualifiers

Ang, D.-C. and Fisher, E.

Kang, D.-C.

Submitted (26-APR-2001) Urology, Comparited (26-APR-2001) Urolog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                karyota; Metazoa; Chordata; Craniata; Vertebrat
mmalia; Eutheria; Euarchontoglires; Glires; Roc
iurognathi; Muroidea; Muridae; Murinae; Mus.
(bases 1 to 3771)
ng,D.-C. and Fisher,P.B.
rine homolog of melanoma differentiaion associa
XH group RNA dependent ATPase
published
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s musculus
ne 5-like p
374384
374384.1 G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               )roSerLeuIleThrPheLeuCyBLyBABnCyBSerValLeuAlaC;
||||||||||:::|||
|CATCGTTAATAACACTTCTCTGCAAAAATTGTAGCATGCTGGTCTK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   euPheSerAspGluAsp
||:::||||||||||
TGTATAGTGATGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTGTAAGAGAAAACAAAGCACTGCAAAAGAAATTTGCTGATTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTATCCTGGAAAAGAAAATGAAAGTCAAAAGAAGCATTGCAAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTATCTGCAAGTGTGGCCAGGCTTGGGGAACAATGATGGTGCACA!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               leIleCysLysCysGlyGlnAlaTrpGlyThrmetMetValHisLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
/strain="C57BL/6J"
/db_xref="taxon:10090"
235. .3312
/note="RNA-dependent ATPase; predicted molecular weight:
115954.50 Da"
/codon_start=1
/product="melanoma differentiation associated gene 5-like
/product="melanoma differentiation associated gene 5-like
/protein"

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3771 bp mRNA
s strain C57BL/6J melanoma d
protein mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA linea
ma differenti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Univer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sity, P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ta; Euteleostomi;
dentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  r ROD 02-MAY-2002
ation associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTCAGAATACTGC 3291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SCTCGGGAGAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NATACAACGACAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ated gene-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /sSerGlyGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACCAATGGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nIleAsnGlyGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ieLysGluLeuTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCGAAGAAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGITTAGATTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'sGlyLeuAspLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAAGGGACTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rSerGluCysCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rThrLysLysGln
| ||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      נא
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            959
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3051
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-515-363C-2 (1-1025) x AF374384
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _feature
                                                                                                                                    161
                                                                                                                                                                                     141
                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                       101
                                                                                                              715
                                                                                                                                                                                                                                                                                                                                                                  415
                                                                                                                                                                                                                                                                                                                                                                                                                   355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    295
                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21
                                                                        PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySer
                                                                                                                         GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla
                                                                                                                                                             LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu
                                                                                                                                                                                                                                                                                                              LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                   GAAACCAAAGAGCAGATTCTTAAAAAAGATCAACACCTGTGGTAACACCAGCGCGGCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                 GluValLysGluGlnIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
           GGCTGCCCAGAAGACAACACAGACTTGGCTAACTCGTCTCACAGAGATGGG
                                                                                                                                                                                                                                                              GATCTGCCCTCTCCTTCCTCTGAGACTGCCCATGACGAGTGTCTCCACTTGCTGACCCTC
                                                                                                                                                                                                                                                                                  AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal
                                                                                                              GAGTCAGGTGTAAGAGAGCTGCTGAGAAGGATTGTGCAGAAGGAAAACTGGTTTTCTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GKTRVAVYITKDHLDKKKQASESGKVIVLVNKVMLAEQLFRKEFNPYLKKWYRIIGLS
GDTQLKISFPEVVKSYDVIISTAQILENSLLNLESGDDDGVQLSDFSLIIIDECHHTN
KEAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPQILGLTASPGVGAAKKQSEAEKHIL
NICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLEIMASIQTYC
QKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEALQINDTIRMIDAY
SHLEAFYTDEKEKKFAVLNDSDKSDDEASSCNDQLKGDVKKSLKLDETDEFLMNLFFD
NKKMLKKLAENPKYENEKLIKLRNTILEQPTRSEESSRGIIFTKTRQSTYALSQWIME
NAKFAEVGVKAHHLIGAGHSSEVKPMTQTEQKEVISKFRTGEINLLIATTVAEEGLDI
KECNIVIRYGLVTNEIAMVQARGRARADESTYVLVTSSGSGVTEREIVNDFREKMMYK
AINRVQNMKPEEYAHKILELQVQSILEKKMKVKRSIAKQYNDNPSLITLLCKNCSMLV
CSGENIHVIEKMHVNMTPEFKGLYIVRENKALQKKFADYQTNGEIICKCGQAWGTMM
VHKGLDLPCLKIRNFVVNFKNNSPKKQYKKWVELPIRFPDLDYSEYCLYSDED"
1228. .1245
/note="DEXH helicase signature; unclassified site"
3755. .3760
                                                                                                                                                                                                                                                                                                                                                                  9.39e-245
4194.00
86.9%
79.6%
79.0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                            (1-3771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3771
817
75
132
2
                                                                                                                                                                                                                                                                                        120
                                                                                                                                     180
                                                                                                                                                                                       160
                                                                                                                                                                                                               654
                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                594
                                                                                                                                                                                                                                                                                                                534
                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                                   474
                                                                                                                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40
                                                                                                                                                               714
                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ্ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         경 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
               뮍
                                           5
                                                                        멍
                                                                                        5
                                                                                                                밁
                                                                                                                                            5
                                                                                                                                                                         밁
                                                                                                                                                                                           ્ર
                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                             뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1075
                                                                                                                                                                          1735
                                                                                                                                                                                                                                                                                                                                                                               1495
                                                                                                                                                                                                                                                                                                                                                                                                                                 1435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1135
                                                                                                                                                                                                                            1675
                                                                                                                                                                                                                                                                             1615
                                                                                                                                                                                                                                                                                                                              1555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1015
                                                                                                                                                                                                                                                                                                                                                     440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                        400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    221
GlnTrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsnA
                                                                                                                                                                          HisTyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluA
|||||| ||||||:::|||||| |||||||:::|
|CGATATTTGAAGCAGAAGCTGAGAAACAATGACCTCAAGAAACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheLeuLysLysTrpTyrArgValIleGlyLeuSerGlyAspThrG
:::||||||||||||||||
TATTTGAAGAAATGGTATCGAATTATTGGATTAAGTGGCGATACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTATCCCCCGAGCCAGAACTGCAGCTCAGGCCTTACCAAATGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AlaSerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAla 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG
                                                                        ThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluP.
||||||||||||:::|||||:::|||||
ACAGTGAAAGAGAATCTTGGTCAACTCAAACACCAAATAAAGGAAC
                                                                                                                                                                                                                                                                                                                                                                                         SerLeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuS
                                                                                                                                                                                                                                                                                                                                                                                                                                PheProGluValValLysSerCysAspIleIleIleSerThrAlaG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ValTyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerG
||||||||::::|||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTAGATGGGAAGAATATTATTATCTGCCTCCCCACGGGAGTGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyH
||||||||||||||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACGACATATTACCAGAGGCTTCTTGTACAGATTCGTCTGTGACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGAGTGTCTTCTGCCTGCTGTCGATGAGTCAAGTCTGGAGACAG
                                        ArgIleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyT
                                                                                                                                                                                                                            CCCCTGCCGCAGATACTAGGACTGACAGCTTCACCTGGTGTTGGAGCAGCCAAAAAAGCAG 1734
                                                                                                                                                                                                                                         ProLeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyG
                                                                                                                                                                                                                                                                                                                              LeuGluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCCTCTTAAATCTGGAGAGTGGAGACGATGACGGTGTGCAGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    alserCysLeuAspGluSerLeuGlyHisAsnSerAsnMet 280
                                                                                                                                                                                                                                                                                                                             .snAsnIleMetArg 459
||||||||||||
|ACAACATCATGAGA 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         erGluSerAspThr 260
::||||||||||
CAGAATCAGACACA 1014
rgLysGluArgVal 599
                                                hrGlnProTyrGlu 579
                                                                                                                                          roCysLysLysPhe 539
                                                                                                                                                                                                                                            lyAlaThrLysGln 499
                                                                                                                                                                                                                                                                                               snLysProVallle 479
                                                                                                                                                                                                                                                                                                                                                                                                    erAspPheSerLeu 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 lnLeuLysIleSer 399
||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCCCAACCAGCT 1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCAGACAAAAAGA 1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                al---AlaAlaArg 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGCCTGGAACGTA 954
                         CCCAACATTATGAG 1974
                                                                                                                                                                             CCTTTACCATTAAA 1794
                                                                                                                                                                                                                                                                              ACAAACCAGCCATT 1674
                                                                                                                                                                                                                                                                                                                                                                                                                                                luProGlyLysVal 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   luValTrpGlyMet 240
                                                                          AGAAATTATGGCA 1914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'sGluPheGlnPro 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'sThrArgValAla 339
||||||||||||
                                                                                                                                                                                          aPheThrIleLys 519
|||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĠĊŢĠĂĂĂĂTĂŢĊĂ 1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACCAGAGTGGCT 1254
                                                                                                                           ATGCAAGAAATTT 1854
                                                                                                                                                                                                                                                                                                                                                                               AGACTTCTCTCTC 1554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAGTTCAACCCA 1374
                                                                                                                                                                                                                                                                                                                               1614
                                                                                                                                                                                                                                                                                                                                                                                                                                   1494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1074
```

β δ

ঠ

밁

ঠ

밁

дb 5 В Ş 음 성

밁

중 음 중

멍

중 유

ঠ

밁 Ś

	12 AGCAGTGAAGTCAAGCCCATGACTCAGACTGAACAAAAAGAAGTCATTAGTAAATTTCGC 80 ThrGlyLysileAsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLys	720 ArgGlyIleIlePheThrLy8ThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThr 739	660 GluAspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeu 679 ::: :::	
Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences PUBMED 12477932 REFERENCE 2 (bases 1 to 3635) AUTHORS Director MGC Project. Direct Submission Gene Collection (MGC), Cancer Genomics of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA. REMARK NIH-MGC Project URL: http://mgc.nci.nih.gov Contact: MGC help desk CONA Library Preparation: Life Technologies, Inc. cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: National Institutes of Health Intramural Sequencing Center (NISC), Gaithersburg, Maryland; Web site: http://www.nisc.nih.gov/ Contact: nisc_mgc@nhgri.nih.gov/ Akhter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B., Akhter, N., Ayele, K., Beckstrom-Sternberg, S.M., Benjamin, B.,	Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson M. C., Bodriguez, A. C., Grimwood, J., Schmutz, J., Myers, R.M.,	OR NI	RESULT 14 BC080200 BC080200 BC080200 BC080200 BC080200 CCDNA clone MGC:90959 IMAGE:3597815), complete cds. ACCESSION BC080200 VERSION BC080200 BC080200 VERSION BC080200.1 GI:51329783 KEYWORDS MGC. MIS musculus (house mouse)	3052 ATTGTAAGAGAAACAAAC 960 IleIleCysLysCysGlyC 3112 ATTATCTGCAAGTGTGGCC 980 ProCysLeuLysIleArgA

Д

ঠ

g

중 음 중

유

8 8 8 8

र्

Ş

중 유

Ş

В

र्

유

Б

Ś

B 65 B 65 B

```
Score:
                                                                                                                                                   Query Match:
DB:
                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                               US-09-515-363C-2 (1-1025) x BC080200
                                                                                                                                                                                                                                                             Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                Scores:
  21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Series: IRAK Plate: 177 Row: a Column: 11
This clone was selected for full length sequencing because it passed the following selection criteria: matched mRNA gi: 23956207. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Blakesley, R.W., Bouffard, G.G., Breen, K., Brinkley, C., Brooks, S., Dietrich, N.L., Granite, S., Guan, X., Gupta, J., Haghighi, P., Hansen, N., Ho, S.-L., Karlins, E., Kwong, P., Laric, P., Legaspi, R., Maduro, Q.L., Masiello, C., Maskeri, B., Mastrian, S.D., McCloskey, J.C., McDowell, J., Pearson, R., Stantripop, S., Thomas, P.J., Touchman, J.W., Tsurgeon, C., Vogt, J.L., Walker, M.A., Wetherby, K.D., Wiggins, L., Young, A., Zhang, L.-H. and Green, E.D.
 ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                        ATGTCGATTGTCTGCTTCTGCAGAGGACAGCTTCAGGAATCTCATCTTATTCTTCAGGCCC
                                                                       MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
                                                                                                                                                                                                                                                                                                                                /product = "Ifihl protein"
/protein id="AAH80200.1"
/protein id="AAH80200.1"
/db_xref="Gi:51329784"
/db_xref="GeneID:71586"
/db_xref="GeneID:71586"
/db_xref="MGI:1918836"
/db_xref="MGI:1918836"
/translation="MGIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
QILKKINTCGNTSAAELLLSTLEQGQWPLGWTQMFVEALEHSGNPLAARYVKPTLIDL
PSPSSETAHDECLHLLTLLQPTLVDKLLINDVLDTCFEKGLLTVEDRNRISAAGNSGN
ESGVRELLRIVQKENWFSTFLDVLRQTGNDALFQELTGGGCPEDNTESDTSLAEGSV
SCFDESLGHNSNMGRDSGTMGSDSDESVIQTKRVSPEPELQLRPYQMEVAQPALDGKN
IIICLPTGSGKTRVAVYITKDHLDKKKQASESGKVIVLVNKVMLAEQLFRKEFNPYLK
KWYRIIGLSGDTQLKISFPEVVKSYDVIISTAQILENSLLNLESGDDDGVQLSDFSLI
IIDECHHTNKEAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPQILGLTASPGVGAAKK
QSEAEKHILNICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLE
IMASIQTYCQKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEALQIN
DTIRMIDAYSHLETFYTDEKEKKFAVLNDSDESDDEASSCNDQLKGDVKKSLKLDETD
EFLMNLFFDNKKMLKKLAENPKYENEKLIKLRNTILEQFTRSEESSRGIIFTKTRQST
YALSQWIMENAKFAEVGVKAHHLIGAGHSSEVKPMTQTEQKEVISKFRTGEINLLIAT
TVAEEGLDIKECNIVIRYGLVTNEIAMVQARGRARADESTYVLVTSSGSGVTEREIVN
DFREKMMYKAINRVQNMKPEEYAHKILELQVQSILEKKMKVKRSIAKQYNDNPSLITL
LCKNCSMLVCSGENIHVIEKMHYNMMTPEFKGLYIVRENKALQKKFADYQTNGEIICK
CGQAWGTMMVHKGLDLPCLKIRNFVVNFKNNSPKKQYKKWVELPIRFDLDYSEYCLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="Mammary tumor. C3(1)-Taductal carcinoma. 5 month old virgin/clone_lib="NCI_CGAP_Mam6"
/lab_host="DH10m"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene="Ifih1"
codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="Ifih1"
/note="synonyms: Helicard,
/db_xref="GeneID:71586"
/db_xref="MGI:1918836"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    db_xref="taxon:10090"
clone="MGC:90959 IMAGE:3597815"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
mol_type="mRNA"
                                                                                                                                                                   6.8e-238
4080.50
84.4%
78.0%
76.8%
                                                                                                                (1-3635)
                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hlcd, MDA5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C3(1)-Tag model.
                                                                                                                                                  3635
800
66
109
51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDA-5"
                                       290
                                                                          20
                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                      g
                                                                                      S
                                                                                                                               日
                                                                                                                                                           S
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                         1044
                                                                                                                                                                     340
                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                   864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaSerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAla 319
GTATCCCCCGAGCCAGAACTGCAGCT
                                                                                                                                                                                                                                                                                                                                                                               GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnVal---AlaAlaArg 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCCTGGATGTTCTGCGCCAAACTGGAAATGATGCACTATTCCAAGAACTAACAGGTGGA 830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu 60
                                                                             IleValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLy
                                                                                                                                  GTTTACATCACCAAAGATCACTT
                                                                                                                                                     ValTyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerG
                                                                                                                                                                                                                              LeuGluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLy
                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTTTGGCAGAAGGGAAGTGTCAGCTGCTTCGATGAAAGTCTTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValSerGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGlyMet 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCTGCCCAGAAGACAAC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySer 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGlnLeuLeuAsnLeu 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAAACCAAAGAGCAGATTCTTAAAAAGATCAACACCTGTGGTAACACCAGCGCGGGCAGAA 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGGCCCTAGAGCACAGTGGCAATCCCCTAGCCGCGCGCTATGTCAAACCCACACTCATT 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGAGCACCTTGGAGCAGGGACAGTGGCCTCTGGGATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               creerrecreadacreceardaceaerererecaerrecaecres
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGTGGACAAACTTCTGATTAACGATGTCTTGGACACTTGCTTCGAG 650
                                                                                                                                  AGACAAGAAGAAGCAGGCATCTG
                                                                                                                                                                                                                                                                                                                                                             FGATTCAGATGAAAGTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----ACAGAATCAGACACA 863
 lnLeuLysIleSer 399
                                                                                                                                                                                                      TGGCCCAACCAGCT 1043
                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAACAGCAACATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGCAGATGTTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   luProGlyLysVal 359
                                                                                                                                                                                                                           ysThrArgValAla 339
                                                                                                                                                                                                                                                                                                                                                            TCCAGACAAAAAGA
                                                                              /sGluPheGlnPro 379
                                                                                                                                  ATCCGGGAAGGTT 1163
                                                          AGAGTTCAACCCA 1223
                                                                                                                                                                                                                                                                                                                                                             983
                                                                                                                                                                                                                                                                                                                                                                                                                                      923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     350
```

ঠ

ş 밁

21 TTCTTTGATAACAAGAAATGTTGAAAAAACTAGCTGAAAACCCAAAATACGAGAATGAA 21 21 TTCTTTGATAACAAGAAAATGTTGAAAAAACTAGCTGAAAAACCCAAAAATACGAGAATGAA 21 00 LysLeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAla 71		560 ArgileGlnThrTyrCysGlnMetSerProMetSerAspPheGlyThrGlnProTyrGlu 57	1524 CCCCTGCCGCAGATACTAGGACTGACAGCTTCACCTGGTGTTGGAGCAGCCAAAAAGCAG 1583 500 AlaLysalaGluGluHisIleLeuLysLeuCysalaAsnLeuAspAlaPheThrIleLys 519 ::::: :::	4 TATTTGAAGAATGGTATCGAATTATTGGATTAAGTGGCGATACCCAGCTGAAATAT
DEFINITION BC078180 CDNA clone interferon induced with helicase C domain 1, mRNA CDNA clone IMAGE:6502757), partial cds. ACCESSION CDNA clone IMAGE:6502757), partial cds. ACCESSION REYWORDS SOURCE ORGANISM Homo sapiens (human) CRGANISM Homo sapiens (human) Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Catarrhini; Hominidae; Homo. REFERENCE 1 (bases 1 to 2540) AUTHORS Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D.,	3021 CCTTGTCTTAAAATAAGGAATTTTGTAGTCAATTTCAAAAATAACTCACCGAAGAAACAG 1000 TyrLysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCys	920 IleHisVallleGluLysMetHisHisValAsnMetThrProGluPheLysGluLe	uLeuGlnMetGln ::: ATTGCAGGTGCAA STyrLysAsnAsn ::: ATACAACGACAAT SSerGlyGluAsp ::: CTCGGGAGAAAAAC	760 2361 780 2421 800 2481 820 2541 840

Ş

밁 5

5

음 성

밁 5 밁 5 밁 र् В ક 밁

ঠ 몽 र्

유

멍 र् 밁 S 밁 ঠ 멍 5 음 성 음

S

TITLE

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REMARK
COMMENT
                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: National Institutes of Health Intramural
Sequencing Center (NISC),
Gaithersburg, Maryland;
Web site: http://www.nisc.nih.gov/
Contact: nisc_mgc@nhgri.nih.gov
Akhter,N., Ayele,K., Beckstrom-Sternberg,S.M., Benjamin,B.,
Blakesley,R.W., Bouffard,G.G., Breen,K., Brinkley,C., Brooks,S.,
Dietrich,N.L., Granite,S., Guan,X., Gupta,J., Haghighi,P.,
Hansen,N., Ho,S.-L., Karlins,E., Kwong,P., Laric,P., Legaspi,R.,
Maduro,Q.L., Masiello,C., Maskeri,B., Mastrian,S.D.,McCloskey,J.C.,
McDowell,J., Pearson,R., Stantripop,S., Thomas,P.J., Touchman,J.W.,
Tsurgeon,C., Vogt,J.L., Walker,M.A., Wetherby,K.D., Wiggins,L.,
Young,A., Zhang,L.-H. and Green,E.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hopkins, R.F., Jordan, H., Moore, T., Max, S.I., Wang, J., Hsleh, F., Diatchenko, L., Marusina, K., Farmer, A.A., Rubin, G.M., Hong, L., Stapleton, M., Soares, M.B., Bonaldo, M.F., Casavant, T.L., Scheetz, T.E., Brownstein, M.J., Usdin, T.B., Toshiyuki, S., Carninci, P., Prange, C., Raha, S.S., Loquellano, N.A., Peters, G.J., Abramson, R.D., Mullahy, S.J., Bosak, S.A., McEwan, P.J., McKernan, K.J., Malek, J.A., Gunaratne, P.H., Richards, S., Worley, K.C., Hale, S., Garcia, A.M., Gay, L.J., Hulyk, S.W., Villalon, D.K., Muzny, D.M., Sodergren, E.J., Lu, X., Gibbs, R.A., Fahey, J., Helton, E., Ketteman, M., Madan, A., Rodrigues, S., Sanchez, A., Whiting, M., Madan, A., Young, A.C., Shevchenko, Y., Bouffard, G.G., Blakesley, R.W., Touchman, J.W., Green, E.D., Dickson, M.C., Rodriguez, A.C., Grimwood, J., Schmutz, J., Myers, R.M., Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E., Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences
L. Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clone distribution: MGC clone distribution information can through the I.M.A.G.E. Consortium/LLNL at: http://image.lln Series: IRAK Plate: 174 Row: p Column: 16
This clone was selected for full length sequencing because passed the following selection criteria: matched mRNA gi: 2 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Strausberg,R.

Direct Submission

Direct Submission

Submitted (19-JUL-2004) National Institutes of Health, Mammalian Submitted (MGC), Cancer Genomics Office, National Cancer Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Altschul, S.F., Zeeberg, B.,
Hopkins, R.F., Jordan, H., M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12477932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 2540)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6502757"
                                                                                                                                                                                                                                                              /gene="IFIH1"
/note="synony"
/codon_start=1
/product="IFIH1 protein"
/protein_id="AAH78180.1"
/db_xref="GI:50415795"
                                                                                                                                                                                                                                                                                                                                                          note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                   /lab
                                                                                                                               gene="IFIH1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             tissue
                                                                                                                                                                                               te="synonyms: MDA5, |
|xref="GeneID:64135"
|xref="MIM:606951"
                                                                                                                                                                                                                                                                                                                                                                                         sue type="Uterus, leiomyosarcoma"
ne_Tib="NIH_MGC_71"
_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                             pCMV-SPORT6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Buetow, K.H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schaefer, C.F., Bhac, M...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bhat, N.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Myers, R.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         lini.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27886567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           be found
```

FEATURES

CDS

밁

ঠ

GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG

luValTrpGlyMet 240

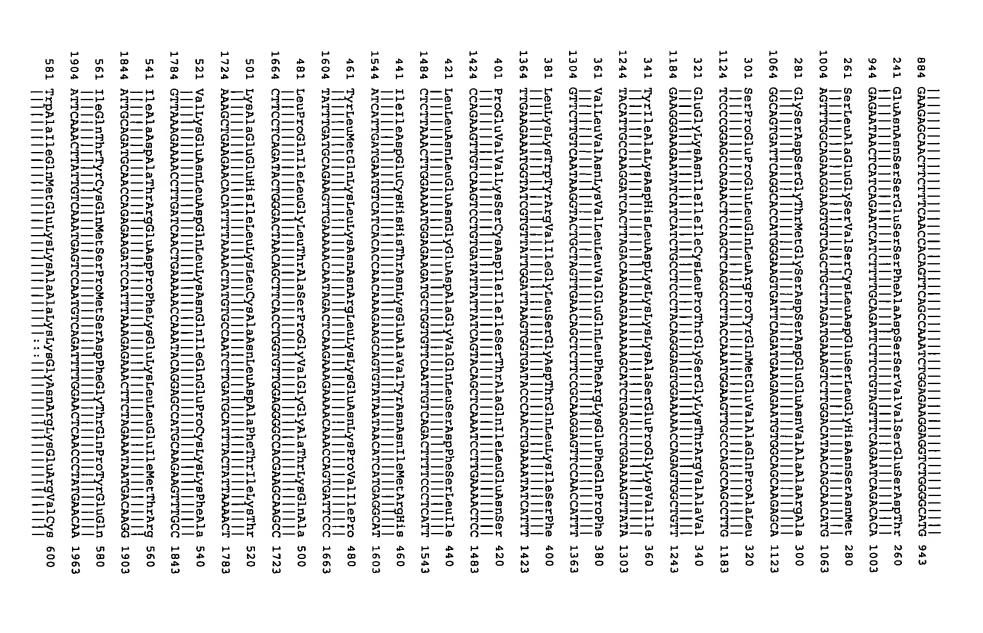
883

밁 S g S 뫄 Ś В S В S 멍 S 문 S 밁 Ś 밁

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-515-363C-2 (1-1025) x BC078180 (1-2540)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                             181
                                                                                                                                                       161
                                                                                                                                                                                            644
                                                                                                                                                                                                                                  141
                                                                                                                                                                                                                                                                         584
                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                               464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpTl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS
                                                                                                                                       GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAs
                                                                                                                                                                                                                                                                                             LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGGTGAAGGAGCAGATTCAGAGGACAGTCGCCACCTCCGGGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGGGTGAAAATGTACATCCAGGTGGAGCCTGTGCTGGACTACCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGTCGAATGGGTATTCCACAGACGAGATTTCCGCTATCTCATCT
                                                               PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG
                                                                                                                   GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAG
                                                                                                                                                                                                                       GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaG
                                                                                                                                                                                                                                                                                                                                                                                        AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAs
                                        TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /translation="MSNGYSTDENFRYLISCFRARVKMYIQVEPVLDYLTFLPAEVKE
QIQRTVATSGNMQAVELLLSTLEKGVWHLGWTREFVEALRRTGSPLAARYMNPELTDL
PSPSFENAHDEYLQLLNLLQPTLVDKLLVRDVLDKCMEEELLTIEDRNRIAAAENNGN
ESGVRELLKRIVQKENWFSAFLNVLRQTGNNELVQELTGSDCSESNAEIENLSQVDGP
QVEEQLLSTTVQPNLEKEVWGMENNSSESSFADSSVVSESDTSLAEGSVSCLDESLGH
NSNMGSDSGTMGSDSDEENVAARASPEPELQLRPYQMEVAQPALEGKNIIICLPTGSG
KTRVAVYIAKDHLDKKKKASEPGKVIVLVNKVLLVEQLFRKEFQPFLKKWYRVIGLSG
DTQLKISFPEVVKSCDIIISTAQILENSLLNLENGEDAGVQLSDFSLIIIDECHHTNK
EAVYNNIMRHYLMQKLKNNRLKKENKPVIPLPQILGLTASPGVGGATKQAKAEEHILK
LCANLDAFTIKTVKENLDQLKNQIQEPCKKFAIADATREDPFKEKLLEIMTRIQTYCQ
MSPMSDFGTQPYEQWAIQMEKKAAKEGNRKERVCAEHLRKYNEALQINDTIRMIDAYT
HLETFYNEEKDKKFAVIEDDSDEGGDDEYCDGDDLKKPLKKDSTDRFLMTLFFE
NNKMLKRLAENPEYENEKLTKLRNTIMEQYTRTEESARGIIFTKTRQSAYALSQWITE
NEKFAEVGVKAHHLIGAGHSSEFKPMTQKKKK"
                                                                                                                                                                                                                                                                                                                                                     TGCCCTCTCCATCGTTTGAGAACGCTCATGATGAATATCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="GeneID:64135"
/db_xref="MIM:606951"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.15e-230
3954.00
99.9%
99.5%
74.4%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                    spLysCysMetGlu
||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hrArgGluPheVal
                                                                                                                                                                                                                                                                           ATAAGTGCATGGAG
                                          GTTAACAGGCTCT
                                                                                                                                                                                                                                                                                                                                                ACTGCTGAACCTC
                                                                                                                                                                                                                                                                                                                                                                                           nLeuLeuAsnLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GIGCITCAGGGCC
 pGlyProGlnVal
                                                                                                                                          nTrpPheSerAla
                                                                                                                                                                                                AAACAATGGAAAT
                                                                                                                                                                                                                     uAsnAsnGlyAsn
|||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rCysPheArgAla
                                                                             uLeuThrGlySer
                                                                                                                   CTGGTTCTCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTCTGCCTGCA
                                                                                                                                                       180
   220
                                        823
                                                                              200
                                                                                                                 763
                                                                                                                                                                                             703
                                                                                                                                                                                                                                   160
                                                                                                                                                                                                                                                                         643
                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                                     583
                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                 523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  283
```

S

Score:



B Q B Q B B

중 음 중

음 성 음 성

유

유

음 성 음

र्

В

중 유

ঠ

& 유

Ş

음 성 음

\$ \$ \$

Search completed: March 13, 2006, 18:53:20 Job time: 12742 secs

맑

2504

AGTGAGTTCAAACCCATGACACAAAAAAAAAAAAAAAA 2539

```
Minimum
Maximum
                                                                            Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Command line parameters:

-MODEL=frame+_p2n.model -DEV=xlp
-Q=/abss/ABSSWEB_spool/US09515363/runat_10032006_181127_7925/app_query.fasta_1
-DB=N_Geneseq_-QFMT=fastap_-SUFFIX=rng_-MINMATCH=0.1_-LOOPCL=0_-LOOPEXT=0
-UNITS=bits_-START=1_-END=-1_-MATRIX=blosum62_-TRANS=human40.cdi_-LIST=45
-DOCALIGN=200_-THR_SCORE=pct_-THR_MAX=100_-THR_MIN=0_-ALIGN=15_-MODE=LOCAL
-OUTFMT=pto_-NORM=ext_-HEAPSIZE=500_-MINLEN=0_-MAXLEN=2000000000_-HOST=abss02p
-USER=US09515363_@CGN_1_1_1929_@runat_10032006_181127_7925_-NCPU=6_-ICPU=3
-NO_MMAP_-NEG_SCORES=0_-WAIT_-DSPBLOCK=100_-LONGLOG_-DEV_TIMEOUT=120
-WARN_TIMEOUT=30_-THREADS=1_-SGAPOP=10_-XGAPEXT=0.5_-FGAPOP=6_-FGAPEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 on:
   4001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 80
                                                                           Score
 5311
5311
5311
5311
                                                                                                                                                            ce greater |
is derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -YGAPEXT=0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                     N Geneseq_21:*
1: geneseqn198
2: geneseqn200
4: geneseqn200
6: geneseqn200
7: geneseqn200
9: geneseqn200
10: geneseqn20
11: geneseqn20
11: geneseqn20
11: geneseqn20
12: geneseqn20
13: geneseqn20
14: geneseqn20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MIOSUM62
Xgapop 10.0
Ygapop 10.0
Fgapop 6.0
Delop 6.0
100.0
                                                                            Query
Match
                                                                                                                                                        is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, rived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-515-363C-2
5311
1 MSNGYSTDENFRYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 March
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4996997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MSNGYSTDENFRYLISCFRA..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Copyright
                                                                                                                                                                                                                   geneseqn2001bs:*
geneseqn2002as:*
geneseqn2002bs:*
geneseqn2003as:*
geneseqn2003bs:*
geneseqn2003ds:*
geneseqn2004as:*
geneseqn2004as:*
geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                                                                                geneseqn1980s:*
geneseqn1990s:*
geneseqn2000s:*
                                                                                                                                                                                                                                                                                                                                                                                   geneseqn2001as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12,
                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
20000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seqs,
3365
3380
3380
3380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2006, 22:09:59; Search time 2412 Seconds (without alignments) 2832.218 Million cell up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GenCore version (c) 1993 - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xgapext
Ygapext
Fgapext
Delext
 12
13
                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3332346308
AAD17203
ADJ74904
ADR14404
AEA23691
                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0.5
0.5
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .....LPITFPNLDYSECCLFSDED 1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5.1.7
Biocceleration
Aad17203 Human mel
Adj74904 Marker ge
Adr14404 Human NF-
Aea23691 Human PRO
                                                                            Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cell updates/sec
```

1090.5 20.5 1069 20.1	1090.5 20.5	Մ		UI	UI	Ui	Ui	Ui	UI	U1		Ui		Φ					1352															285		303	07	307 99.	5311 100.0
3258 4468	3065	3065	3065	3065	3065	3065	3065	3065	3065	4372	4372	4372	956	2250	1270	1258	2613	2590	2590	1319	1284	1392	1392	1382	1382	1557	1443	1776	1967	3771	3668	3131	3379	3446	3372	3928	3434	3434	3380
8 13	14	14	13	13	13	12	12	12	10	14	14	13	ຫ	μ,			4			4								_					12	10	σ	Ľ	14	14	14
ABX63631 ACN41904	AEA36112	AEA23524	ADP25010	ADR14232	ADR25611	ADN04859	ADJ75029	ADJ74908	ADF76334	AEB22799	ADY17515	ADR97293	AAS91688	ADM03387	AAS01151	AAS01149	AAH15201	ADM44407	ABZ11889	AAS41517	ABA04913	ADS82789	ADI30722	ADC32572	AAI61071	AAI59285	ABA04916	ADA53260	AAS40960	ADJ75813	ADQ22237	AAD11170	ADN04879	ADC30823	ABA04908	ACN91892	ADY20376	ADY17563	AEA36113
Abx63631 Human cDN Acn41904 Human dia	Aea36112 Human nuc	4	Adp25010 PRO polyp	N			Adj75029 Marker ge	Adj74908 Marker ge			Ady17515 DNA encod	Ç	Aas91688 DNA encod	Adm03387 Human cDN	Aas01151 Interfero		Aah15201 Human cDN	-1	Abz11889 Human pol	Aas41517 cDNA enco	Aba04913 Human RNA	Ads82789 Human lym		Adc32572 Human nov	Human		Aba04916 Human RNA	0	Aas40960 cDNA enco	Adj75813 Marker ge	Adq22237 Human sof	Aadl1170 Human mel	Adn04879 Antipsori	Adc30823 Human nov	Ξ	Acn91892 Breast ca	Ady20376 DNA encod	Ady17563 DNA encod	3 Hum

ALIGNMENTS

```
RESULT 1
AAD17203
ID AAD1
XX
AC AAD1
XX
DT 29-N
XX
DE Huma
XX
Huma
XX
KW Huma
KW RNA
KW neur
KW brea
KW cent
XX
FT CDS
FT CDS
FT misc
FT misc
FT misc
                                                                                                                                                                         Human; melanoma differentiation associated gene; Mda-5; interferon; IFN; RNA helicase motif; caspase recruitment domain; CARD; therapy; melanoma; neuroblastoma; astrocytoma; glioblastoma; multiforme; cancer; cervical; breast; colon; prostate; osteosarcoma; chrondosarcoma; systemic toxicity; central nervous system; cytostatic; apoptosis; ss.
           misc_feature
                                                misc_feature
                                                                                                                                                                                                                                                                                       29-NOV-2001
                                                                                                                                                                                                                                                                                                                   AAD17203;
                                                                                                                                                                                                                                                                                                                                            AAD17203 standard; cDNA; 3365
                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                               melanoma
                                                                                                                                                                                                                                                                                      (first entry)
                                                    /product= "Human r
(Mda)-5 protein"
3225. 3228
                                                                                                                                                                                                                                                             differentiation associated (Mda)-5 cDNA.
/note= "ATTTA motif"
3284. .3287
/*tag= c
                                                                                                             169. .3246
                                                                                                                      Location/Qualifiers
                                        /*tag=
                                                                                               *tag=
                                           ۵
                                                                                             þ
                                                                                                                                                                                                                                                                                                                                              BP.
                                                                                 melanoma
                                                                                  differentiati
```

on associated

```
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                          Alignment
Pred. No.:
                                                       멍
                                                                           5
                                                                                                     밁
                                                                                                                     S
                                                                                                                                                  ф
                                                                                                                                                                       á
                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                           US-09-515-363C-2 (1-1025) x AAD17203
                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to an isolated nucleic acid encoding a melanoma differentiation associated gene-5 (Mda-5) polypeptide. Mda-5 contains a caspase recruitment domain (CARD) and a RNA helicase motif. Mda-5 is a novel interferon (IFN) inducible gene with structural similarities to RNA helicases and CARD motif containing proteins. Mda-5 created with the combination of recombinant fibroblast IFN and the cantileukaemic compound mezerein (MEZ). Mda-5 is useful for identifying compounds that may induce its expression. Mda-5 is useful for treating cancer e.g., melanoma, neuroblastoma, astrocytoma, glioblastoma cancer, osteosarcoma, chrondosarcoma and especially where the cancer is a cancer of the central nervous system and apoptosis. The Mda-5 promoter exhibits melanocyte tissue specificity and minimises systemic toxicity. The present sequence is human Mda-5 cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 200
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nucleic acid sequences encoding a Melanoma Differentiation Associated Gene useful for cancer cell growth suppression, apoptosis and anti-viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-FEB-2001; 2001WO-US006960.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-SEP-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fisher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200164707-A1
                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (UYCO ) UNIV COLUMBIA NEW YORK
                                                                                                                                                                                                                                                                                                                            No.:
                                                         349
                                                                                                      289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>,</u>
                                                                                                                            41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽B,
                                                                                                                                                                                                                                                                                                                                                            3365
                         GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr
                                                                                                                    GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                                                                                                                                                               ArgValLysMetTyrI1eGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                                                                                                                                                               MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Page 16-18;
            GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACG
                                                                      LeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal
                                                                                                       Kang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-00515363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "ATTT
3343. .3348
/*tag= d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ď,
                                                                                                                                                                                                                                                                0
5311.00
100.0%
100.0%
100.0%
                                                                                                                                                                                                                                                                                                                                                             1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        152pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gopalkrishnan
                                                                                                                                                                                                                                                                                                                                                            A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "ATTTA motif"
                                                                                                                                                                                                                                                                                                                                                            644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        English
                                                                                                                                                                                                                                                                                                                                                            ü
                                                                                                                                                                                                                                            (1-3365)
                                                                                                                                                                                                                                                                                                                                                             753
                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                            G;
                                                                                                                                                                                                                                                                                                                                                             830
                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                   3365
1025
0
0
0
                                                                                                                                                                                                                                                                                                                                                            ď;
                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                              Other;
                                                         CTCGGGAATTCGTG
                                                                                                                                                    288
                                                         408
                                                                                80
                                                                                                        348
                                                                                                                             60
                                                                                                                                                                           40
                                                                                                                                                                                                 228
                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                        ø
                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                      ঠ
                                                                 밁
                                                                                       Ş
                                                                                                                   멼
                                                                                                                                ঠ
                                                                                                                                                            8
                                                                                                                                                                                    S
                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                               뭕
                                                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뫄
S
                                                                                                                                                                                                                                                                                                                                                   1069
                                                                                                                    1369
                                                                                                                                                                 1309
                                                                                                                                                                                                             1249
                                                                                                                                                                                                                                                          1189
                                                                                                                                                                                                                                                                                                      1129
                                                                                                                                                                                                                                                                                                                                                                                                  1009
                                                                                                                                                                                                                                                                               341
                                                                                                                                                                                                                                                                                                                             321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        469
                                                                                            421
                                                                                                                                         401
                                                                                                                                                                                     381
                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                        281
                                                                                                                                                                                                                                                                                                                                                                                                                                               949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101
                                               441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GluSerGlyValArgGluLeuLeuLy8ArgIleValGlnLy8GluAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaG
                                                                                                                                                                GAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAA
                                                                                                                                                                                                                                                                                                                   GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysThrArgValAlaVal 340
                                                                                                                                                                                                                                                                                                                                                                                                  GGCAGTGATTCAGGCACCATGGGAAGTGATTCAGATGAAGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGG
                                     IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnA
                                                                                   LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerA
                                                                                                                                  ProGluValValLysSerCysAspIleIleIleSerThrAlaGlnI:
                                                                                                                                                                                                            GTTCTTGTCAATAAGGTACTGCT
                                                                                                                                                                                                                         ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysG
                                                                                                                                                                                                                                                          TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGC
                                                                                                                                                                                                                                                                      TyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerGluP)
                                                                                                                                                                                                                                                                                                                                                     TCCCCGGAGCCAGAACTCCAGCTCAGGCCTTACCAAATGGAAGTTG
                                                                                                                                                                                                                                                                                                                                                                  SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValA
                                                                                                                                                                                                                                                                                                                                                                                                             GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaArgAla 300
                                                                                                                                                                                                                                                                                                                                                                                                                                               AGTTTGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATTGCT
TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnL
                                                                       CTCTTAAACTTGGAAAATGGAGAAGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCATT 1488
                                                                                                                     CCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTG
                                                                                                                                                               TGATACCCAACTGAAAATATCATTT 1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InLeuLeuAsnLeu 120
|||||||||||||
|AACTGCTGAACCTC 528
  ysProValllePro 480
                                      \BnIleMetArgHis 460
                                                                                   spPheSerLeuIle 440
                                                                                                                                                                                                             roGlyLysVallle 360
|||||||||||||
|CTGGAAAAGTTATA 1248
                                                                                                                                                                                                                                                                                                                                                                                                  TGGCAGCAAGAGCA 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGAATCAGACACA 948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           erGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   spGlyProGlnVal 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTTAACAGGCTCT 768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  luLeuThrGlySer 200
                          ACATCATGAGGCAT 1548
                                                                                                                     TĊĊTTĠĂĂĂĂĊTĆĊ 1428
                                                                                                                                                                                                                                                                                                                                                     cccaeccaectre 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                luValTrpGlyMet 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                snTrpPheSerAla 180
|||||||||||
|ACTGGTTCTCTGCA 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAACAATGGAAAT 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATAACAGCAACATG 1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTCTGGGGCATG 888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           рLysCysMetGlu 140
                                                                                                                                 .eLeuGluAsnSer 420
                                                                                                                                                                                                                                                                                                                                                                 aGlnProAlaLeu 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                             uAsnAsnGlyAsn 160
                                                                                                                                                                                                                                                                                                        CAGAGTGGCTGTT 1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TAAGTGCATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        828
```

```
1789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1849
                                                                                                                                                   2449
                                                                                                                                                                                                       2389
                                                                                                                                                                                                                                                            2329
                                                                                                                                                                                                                                                                                                                 2269
                                                                                                                                                                                                                                                                                                                                                                      2209
                                                                                                                                                                                                                                                                                                                                                                                                                           2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2029
                                                                                              2509
                                                                                                                                                                                                                                                                                                                                          701
                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          501
                                                                                                                        781
                                                                                                                                                                                                                                 741
                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                               681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              621
                                                                                                                                                                                                                                                            GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                         CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                             SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThr
                                                                                                                                                                                                       AspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTAAAGAAAACCTTGATCAACTGAAAAACCAAATACAGGAGCCATGCAAGAAGTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1668
                                                                                                                                                                                                                                  760
                                                                                                                                                                                                                                                                                       740
                                                                                                                                                                                                                                                                                                                  2328
                                                                                                                                                                                                                                                                                                                                                                       2268
                                                                                                                                                                                                                                                                                                                                                                                                  700
                                                                                                                                                                                                                                                                                                                                                                                                                                                       680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                500
                                                                                               2568
                                                                                                                                                    2508
                                                                                                                                                                                780
                                                                                                                                                                                                         2448
                                                                                                                                                                                                                                                             2388
                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                            2208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2148
    RESULT 2
ADJ74904
ID ADJ7
XX
AC ADJ7
XX
DT 20-P
XX
DE Mark
XX
DE M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            8 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B & B & B & B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                   Marker gene
                  WPI; 2004-193155/19
                                                                                               06-AUG-2002;
20-MAR-2003;
                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                               20-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                     ADJ74904
                                                                                                                                                                                                                                                                                                                                                                                                                                            3229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           981
                                            'n
                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                            Sugita Y,
                                                                                                                                                                                                                                                                                                     SEQ ID
                                                                                                                                                                                                                                                                                                                               (first
                                                                       RES
                                                                       INC.
                                             Yamaya
```

ち 음 성

8

Z,

Kubo

Ħ,

Nagai

Ħ,

hara K;

8 8 8 8 8

δ

밁

장 음

청 음 청

음 성 음 성

음 성 음 성

유 양 명

8

음 성 음

ঠ

```
04-AUG-2003; 2003EP-00254857.
                                                                                                            bronchial asthma; chronic obstructive pulmonary di respiratory epithelial cell; interleukin-13; respi gene therapy; marker gene; gene; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HisVallleGluLysMetHisHisValAsnMetThrProGluPheLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLe
                                                                                                                                                                                                                                                                                                       IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysG
                                                                                                                                                                                                                                                                                                                                                                                                                                   CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTyr 1000
                                                                                                                                                                                                                                                                 TTTAGTGATGAGGAT
                                                                                                                                                                                                                                                                            PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACA
2002JP-00229312
2003JP-00077212
                                                                                                                                                                                                                       DNA;
                                                                                                                                                         NO:156
                                                                                                                                                                                                                       3380
                                                                                                                                                                                                                                                                                  1025
                                                                                                                                                                                                                                                                 3243
                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                   leAsnGlyGluIle 960
                                                                                                                           y; antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTGGTTCAGGAGTT 2688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SAlaIleHisCys 860
||||||||||||
NAGCTATACATTGT 2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SGluLeuTyrIle 940
||||||||||
GGAACTTTACATT 2988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rGlyGluAspIle 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TLYSASNASNPTO 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UGlnMetGlnSer 880
                                                                                                                                                                                                                                                                                                                                                                                         CTTAGATTTGCCT 3108
                                                                                                                                                                                                                                                                                                                                                                                                         yLeuAspLeuPro 980
                                                                                                                                                                                                                                                                                                           AGAATGCTGTTTA 3228
                                                                                                                                                                                                                                                                                                                      rGluCysCysLeu 1020
```

```
Best L
Query
DB:
                                                                                        δ
                                                                                                                        멍
                                                                                                                                             5
                                                                                                                                                                                밁
                                                                                                                                                                                                           S
                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cr The present invention describes a method of testing for bronchial asthmatic or chronic obstructive pulmonary disease. The method comprises conditions a subject, comparing the expression level of a marker gene in a biological sample from a subject, comparing the expression level determined with the compression level of the marker gene in a biological sample from a healthy subject, and judging whether the subject has bronchial asthma or chronic constructive pulmonary disease. The marker gene comprises: (a) a group of genes (S1) whose expression levels increase when respiratory epithelial colls are stimulated with interleukin-13; or (b) a group of genes (S2) colls are stimulated with interleukin-13; or (b) a group of genes (S2) colls are stimulated with interleukin-13. Also described: (1) a reagent (1) for testing for bronchial asthma or chronic obstructive pulmonary disease; (2) a kit for screening for a candidate compound for a therapeutic agent (C1) as a naimal model for bronchial asthma or chronic obstructive pulmonary disease; (3) conchial asthma or chronic obstructive pulmonary disease; (3) conchial asthma or chronic obstructive pulmonary disease; (3) a marker gene or an antisense nucleic acid corresponding to a portion of the marker gene, a ribozyme, a polymucleotide that suppresses the corresponding to a portion of the gene through an RNAi effect or an antibody recognising caprobe has been immobilised to assay a marker gene. (1) has respiratory and antiasthmatic activities, and can be used in gene therapy. The method is useful for testing for or screening for a therapeutic agent for pronchial asthma or chronic obstructive pulmonary disease, on which a grobe has been immobilised to assay a marker gene. (1) has respiratory caprobe has been immobilised to assay a marker gene. (1) has respiratory and can be used in gene therapy. The method is useful for testing for or screening for a therapeutic agent for method is useful for a therapeutic agent for a condition of the present invention.
                                                                B
                                                                                                                                                                                                                                                                                                                                                          US-09-515-363C-2 (1-1025) x ADJ74904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Testing for bronchial asthma or chronic obstructive pulmonary disease comparing the expression level of a marker gene in a biological sample from a subject with the expression level of the gene in a sample from healthy subject.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores
                                                                                                                         349
                                                                                                                                                                                                                                                                                                  169
                                                                  409
                                                                                                                                                                                289
                                                                                             81
                                                                                                                                                                                                 GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                                                                                                                                                                                                                                                        ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                                                    GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr
                                                                                                                                        LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal
                                                                                                                                                                                                                                                                                                                  MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
           GACTTGCCCTCTCCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCTGAACCTC
                             GAGGTGAAGGAGCAGAT
                                                                                                                                                                                                                                                                                                                                                                                    0
5311.00
100.0%
100.0%
100.0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ü
                                                                                                                                                                                                                                                                                                                                                            (1-3380)
                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>Ω</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                       3380
1025
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ς,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gample
e from a
                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ρυ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              γď
                                         120
                                                                  468
                                                                                                                           408
                                                                                                                                                                                   348
                                                                                                                                                                                                                                                                      40
                                                                                                                                                                                                                                                                                                   228
                                                                                                                                                     90
                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                            Ś
                                                                                                                                                                                               g
                                                                                                                                                                                                                           ર્ક
                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                 뫄
                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                              S
                                                                               밁
                                                                                                        Ş
                                                                                                                                       밁
                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                 1369
                                                                                                                                                                                                                                                          1309
                                                                                                                                                                                                                                                                                                                   1249
                                                                                                                                                                                                                                                                                                                                                                          1189
                                                                                                                                                                                                                                                                                                                                                                                                                                    1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1009
                                                                                                                                                                                                                                                                                                                                                                                                       341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                    421
                                                                                                                                                                                                                            401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               161
                                                                                                              441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 220
                                                                                                                                                                                                                                                                                                                                                                                           TyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerGluP
                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysTt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCAGTGATTCAGGCACCATGGGAAGTGATTCAGATGAAGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GATTGCTCAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluSerGlyValArgGluLeuLeuLysArg]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuA
                                                                                                                                                         ProGluValValLysSerCysAspIleIleIleSerThrAlaGlnI
                                                                                                                                                                                                                                                                       LeuLysLysTrpTyrArgValIleGlyLeuSerGlyAspThrGlnL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGAGCAACTTCTTTCAACCACAGTTCAGCCAAATCT
LeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyA
                                           TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnL
                                                                                   ATCATTGATGAATGTCATCACACCAACAAGAAGCAGTGTATAATA
                                                                                                   IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnA
                                                                                                                                                                                                                                                                                                                                                                           TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGC
                                                                                                                                                                                                   CCAGAAG
                                                                                                                                                                                                                                                            TTGAAGAAATGGTATCGTGTTATI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATGAAAGTCTTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      isAsnSerAsnMet 280
                                                                                                   BnIleMetArgHis 460
                                                                                                                                                             spPheSerLeuIle 440
                                                                                                                                                                                                   leLeuGluAsnSer 420
                                                                                                                                                                                                                                                                                 euLysIleSerPhe 400
                                                                                                                                                                                                                                                                                                                                                                                            roGlyLysVallle 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        erGluSerAspThr 260
 laThrLysGlnAla 500
                             AACCAGTGATTCCC 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            luLeuThrGlySer 200
                                                                                                                                                                                                                                                            rGAAAATATCATTT 1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .aGlnProAlaLeu 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGCAGCAAGAGCA 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGAATCAGACACA 948
                                                                                                                                                                                                                                                                                                                   uPheGlnProPhe 380
||||||||||||
|GTTCCAACCATTT 1308
                                                                                                                                                                                                                                                                                                                                                                                                                                  rArgValAlaVal 340
|||||||||||
|CAGAGTGGCTGTT 1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     uValTrpGlyMet 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              uAsnAsnGlyAsn 160
||||||||
                                           sProValIlePro 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGTTCTCTGCA 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nTrpPheSerAla 180
||||||||||
                                                                                     CATCATGAGGCAT 1548
                                                                                                                                             CTTTTCCCTCATT 1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCCAGCCTTG 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGTCCTCAAGTG
                                                                                                                                                                                                                                                                                                                                                                            GGAAAAGTTATA 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              768
```

Ś

```
2509
                                                                                                                                                                               2449
                                                                                                                                                                                                                              2389
                                                                                                                                                                                                                                                                            2329
                                                                                                                                                                                                                                                                                                                            2269
                                                                                                                                                                                                                                                                                                                                                                          2209
                                                                                                                                                                                                                                                                                                                                                                                                                        2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1609
                                                                                                        801
                                                                                                                                                                                                                                                    741
                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                  701
             841
IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                                                              AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LysAlaGluGluHisIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlyIleIlePheThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThrGlu
                                                                                                                                                                                                                                                                                                                           PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGG
                                                  GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                                               CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                                                                                                                                                                                                             GGAATAATCTTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCAGTGGATTACTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                     AspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGCGTATACTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TrpAlaIleGlmMetGluLysLysAlaAlaLysLysGlyAsnArgLysGluArgValCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAACT
                                                                                   TGTAACATTGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          leLeuLysLeuCysAlaAsnLeuAspAlaPheThrIleLysThr
                                      CTCACAGTGGTTCAGGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      520
                                                                                                                                                         800
                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                     760
                                                                                                                                                                                                                                                                             2388
                                                                                                                                                                                                                                                                                                   740
                                                                                                                                                                                                                                                                                                                            2328
                                                                                                                                                                                                                                                                                                                                                                                                   700
                                                                                                                                                                                                                                                                                                                                                                                                                          2208
                                                                                                                                                                                                                                                                                                                                                                                                                                                  680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1668
                                                                                                                                                                                2508
                                                                                                                                                                                                                               2448
                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                           2268
```

```
3049
                                                                                                                                                                       2989
                                                                                                                                                                                                                     2929
                                                                                                                                                                                                                                                                   2869
                                                                                                                                                                                                                                                                                                                 2809
                                                                                                                                                                                                                                                                                                                                                                                                              2689
                                                                                                  981
                                                                                                                                                                                                                                                                                          901
                                                                                                                                                                                                                                                                                                                                       881
                                                                                                                                                                                  ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnI
                                                                                                                                                                                                                    SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysS.
                                                                                                                                                                                                                                                                                                                                                                         ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetGlnSer 880
                                                                                                                                                                                                                                                                                                                                                                                                             ATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATA
                                            LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrS
                                                                             IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                                       ATAATGGAAAAGAAATGAAAACCAAGAAAATATTGCCAAGCATT
                                                                                                                                                                                                                                                                                                                              IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTy
                                                                                                                                                                                                                                                                                                                                                                GTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGT 2808
PheSerAspGluAsp
       1025
                                                erGluCysCysLeu 1020
                                                                                           hrLysLysGlnTyr
                                                                                                                                            TylewAspLeuPro 980
                                                                                                                                                                         TAAATGGTGAAATC
                                                                                                                                                                                               leAsnGlyGluIle 960
                                                                                                                                                                                                                      AGGAACTTTACATT
                                                                                                                                                                                                                                                                                    erGlyGluAspIle
                                 CAGAATGCTGTTTA 3228
                                                                                                                                                                                                                                                                    CTGGGGAAGATATC
                                                                                                                                                                                                                                                                                                                   ACAAGAATAACCCA
                                                                                                                                                                                                                                                                                                                                                                                                               AAGCTATACATTGT 2748
                                                                                                                                                                                                                                     /8GluLeuTyrIle
                                                                                                                                                                                                                                                                                                                             /rLysAsnAsnPro 900
                                                                                                                                                                         3048
                                                                                                                                                                                                                                             940
                                                                                                                                                                                                                                                                    2928
                                                                                                                                                                                                                                                                                          920
                                                                                                                                                                                                                                                                                                                  2868
                                                                                                     1000
                                                                                                                                                                                                                      2988
                                                                              3168
                                                                                                                            3108
```

음 성 음 성

8 ঠ 뮍

5

명

뮹 Ş

음 성

음 성 음

δ

멍 5

g

S

망 ঠ 멍 5

밁

standard; DNA; 3380

ADR14404;

(first entry)

pathway-associated gene SeqID405

RESULT 3
ADR14404
ID ADR1
XX
AC ADR1
XX
DT 21-C
XX
DE Huma
XX
NF-k
KW NF-k
KW anti
KW immu
KW immu
KW immu
KW immu
KW vira
KW vira
KW vira
KW vira
KW vira
KW rheu
KW auto
KW aber
KW aber
KW aber
KW aber
KW aber
KW HIV
XX
OS Homo
XX
PD 05-A NF-kappaB pathway; antiinflammatory; cytostatic; hepatotropic; virucide;
KW antiarthritic; antirheumatic; gastrointestinal-Gen; antiasthmatic;
KW antiarteriosclerotic; immunomodulator; cerebroprotective; vasotropic;
KW immunosuppressive; vulnerary; gene therapy; immune disorder;
KW inflammatory disorder; NF-kappaB regulation; cancer; aberrant apoptosis;
KW hepatic disorder; Hodgkin's lymphoma; haematopoietic tumour;
KW viral infection; HIV-1; HTLV-1; hepatitis B; hepatitis C; EBV; influenza;
KW viral replication; host cell survival; evasion of immune response;
KW rheumatoid arthritis; inflammatory bowel disease; colitis; asthma;
KW atherosclerosis; cachexia; euthyroid sick syndrome; stroke; EAE;
KW aberrant acute phase response; hypercongenital condition; birth defect;
M aberrant signal transduction; proliferating disorder; cancer;
KW HIV propagation; gene; ds; human.

음 성 음 성

중 음 중

밁 ঠ

유 양 명

Ş

g

장 유

청 음 성

밁

ঠ

음 성

음 성

음 성

13-JAN-2004; 2004WO-US000798.

```
Best L
Query
DB:
                                                                                                                                                                                                                                                                                                       Alignment
Pred. No.:
Score:
                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                           This invention relates to the novel association of protein sequences (and the genes which encode them) to the NF-kappaB pathway. The invention may cyclostatic, hepatotropic, virucide, antiarthritic, antirinal manatory, cytostatic, hepatotropic, virucide, antiarteriosclerotic, gastrointestinal-Gen, antiasthmatic, antiarteriosclerotic, cyastrointestinal-Gen, antiasthmatic, antiarteriosclerotic, cyastrointestinal conditions or diseases associated with the NF-kappaB proteins and nucleotides are cyallation for the condition is an immune disorder, an inflammatory disorder. Cyastrome disorders, hodgkin's lymphomas, haematopoietic tumours, hyper-Igm cyallated to aberrant NF-kappaB regulation, cancer, aberrant apoptosis. Cyastromes, hypohidrotic ectodermal dysplasia, x-linked anhidroctic cyastromes, hypohidrotic ectodermal dysplasia, x-linked anhidroctic cyastrome, hepatitis C, EBV, influenza, viral infections, HIV-1, hepatitis B, hepatitis C, EBV, influenza, viral infections, HIV-1, host cell survival, evasion of immune responses, rheumatoid arthritis, inflammatory bowel disease, colitis, asthma, atherosclerosis, cachexia, euthyroid sick syndrome, stroke, EAE, autoimmune disorders, disorders a, euthyroid sick syndrome, stroke, EAE, autoimmune disorders, disorders related to hyper immune activity, disorders related to aberrant acute phase responses, hypercongenital conditions, birth defects, necrotic lesions, wounds, conditions related to organ transplant cyastrome, stroke parated to aberrant signal transduction, wounds, cyastrome, stroke parated to aberrant signal transduction, the indexer from Genbank.
                                                                                                                                                                                                                                                                                                                                                            В
                                                                                    Ś
                                                                                                                   뭐
                                                                                                                                      5
                                                                                                                                                                     망
                                                                                                                                                                                              8
                                 ঠ
                                                                                                                                                                                                                         US-09-515-363C-2 (1-1025) x ADR14404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated polynucleotides and polypeptides associated with NF-kappaB pathway, useful for diagnosing, treating, or preventing disorders or diseases associated with NF-kappaB pathway.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 200
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-JAN-2003;
12-MAY-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (BRIM ) BRISTOL-MYERS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2004-562168/54.
)B; ADR14405.
                                                                289
                                                                                        41
                                     61
                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SG,
                                                                                                                                                                     MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
                                                                             GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                             LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal
                                                                                                                                  ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2003US-0440068P
2003US-0469757P
                                                                                                                                                                                                                                                                                                                                                            1153 A;
                                                                                                                                                                                                                                                  0
5311.00
100.0%
100.0%
100.0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             405; 237pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SQUIBB
                                                                                                                                                                                                                                                                                                                                                             644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Feder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ဗ
                                                                                                                                                                                                                                                                                                                                                            ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ä,
                                                                                                                                                                                                                         (1-3380)
                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                            753 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carman
                                                                                                                                                                                                                                                                                                                                                             830
                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                     3380
1025
0
0
0
                                                                                                                                                                                                                                                                                                                                                             ς;
                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                             Other;
              408
                                        08
                                                                348
                                                                                                                    288
                                                                                                                                             40
                                                                                                                                                                       228
                                                                                                                                                                                                 20
                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                             र्
                                                                          밁
                                                                                                    ঠ
                                                                                                                              밁
                                                                                                                                                   ঠ
                                                                                                                                                                                   밁
                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                 멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           명
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
S
                                                                                                                                  1309
                                                                                                                                                                                      1249
                                                                                                                                                                                                                                          1189
                                                                                                                                                                                                                                                                                             1129
                                                                                                                                                                                                                                                                                                                                                1069
                                                                                                                                                                                                                                                                                                                                                                                                     1009
                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     469
                                                    421
                                                                                                        401
                                                                                                                                                          381
                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                 341
                                                                                                                                                                                                                                                                                                                       321
                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                        949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlualaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaG
                                                                                                                                                                                      GAAGAGCAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACTTGCCCTCTCCATCGTTTGAGAACGCTCATGATGAATATCTCC
                                                                             GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysT
                                                                                                                                                                                                                                                                                                                                                                                                     GGCAGTGATTCAGGCACCATGGGAAGTGATTCAGATGAAGAGAATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGTTTGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATG 1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuG
                                                                                                                                  TTGAAGAAA
                                                                                                                                                TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGC
                                                                                                                                                                                                                                                      TyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerGluProGlyLysValIle 360
                                                                                                                                                                                                                                                                                              GAAGGGAAGAATATCATCATCTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaArgAla 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTT
 IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnA
                                           LeuLeuAsnLeuGluAsnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAACCACAGTTCAGCCAAATCTGGAGAAGG
                                           lyGluAspAlaGlyVal
                              AGATGCTGGTGTTCAATTGTCAGACTTTTCCCTCATT 1488
                                                                                                                                    TGGATTAAGTGGTGATACCCAAC
                                                                                                                                                                                                                                                                                                CCCTACAGGGAGTGGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rgtccaag.
                                                                                TCCTTGAAAACTCC 1428
                                                                                                                                                    euLysIleSerPhe 400
                                                                                                                                                                                      hrArgValAlaVal 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 luValTrpGlyMet 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       spGlyProGlnVal 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gnProGluLeuThr
| | | | | | | | | | | | | | | |
   snIleMetArgHis 460
                                                                                                                                    TGAAATATCATTT 1368
                                                                                                                                                                                                                                           CTGGAAAAGTTATA 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       isAsnSerAsnMet 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGAATCAGACACA 948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGGTCTGGGGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGTCCTCAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        luLeuThrGlySer 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                luAsnAsnGlyAsn 160
||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCTGAGCTCACG
                                                                                              eLeuGluAsnSer 420
                                                                                                                                                                                                                                                                                                                                                                                                      GGCAGCAAGAGCA 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAAGTGCATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                %PLY8CY8MetGlu 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTGCTGAACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nLeuLeuAsnLeu 120
|||||||||||
                                           pPheSerLeuIle 440
                                                                                                                                                                                                                                                                                                                                                  CCAGCCAGCCTTG 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        528
```

```
LeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAlaVal
                                                                                                                                                                                                                                                                                                          AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
                                                                                                                                                                                                                                                                                                                                                                        SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThr
                                                                                    ABNGluLysPheAlaGluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHisSer
                                                                                                                                                                                        PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys
                                                                                                                                                                                                               AspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhe
                                                                                                                                                                                                                                             LysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPheThrIleLysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                       IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArg
                                                                                                                                                                                 TTTGAAAACAATAAAATGTTGAAAAGGCTGGCTGAAAACCCAGAATATGAAAATGAAAAG
                                       800
                                                     2508
                                                                                    2448
                                                                                                   760
                                                                                                                                                  2328
                                                                                                                                                                 720
                                                                                                                                                                                               700
                                                                                                                                                                                                                2208
                                                                                                                                                                                                                               680
                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                             2088
                                                                                                                                                                                                                                                                                           640
                                                                                                                                                                                                                                                                                                           2028
                                                                                                                                                                                                                                                                                                                           620
                                                                                                                                                                                                                                                                                                                                          1968
                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                         1908
                                                                                                                                                                                                                                                                                                                                                                                       580
                                                                                                                                                                                                                                                                                                                                                                                                        1848
                                                                                                                                                                                                                                                                                                                                                                                                                     560
                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1608
         820
                       2568
                                                                    780
                                                                                                                                                                                 2268
                                                                                                                                                                                                                                              2148
RESULT 4
AEA23691
ID AEA2
XX
AC AEA2
XX
DT 11-A
XX
DE Huma
XX
Immu
KW Immu
KW Immu
KW Musc
KW ds;
XX
PD 09-J
XX
PF 02-A
XX
PR 03-A
XX
PA (GET
XX
                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                 정 유
                                                                                                                                                                                                                                                                중 음 정
                                                                                                                                                                                                                                                                                                             음 성 음 성
                                                                                                                                                                                                                                                                                                                                                                           8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                  Immunosuppressive;
Muscular-Gen.; Vasc
ds; gene.
                                                                                                           immune disorder; PRO; Antiinflammatory; Dermatological;
Immunosuppressive; Antirheumatic; Antiarthritic; Osteop.
Muscular-Gen.; Vasotropic; Antianemic; Antipsoriatic; I
                       03-MAR-2003; 2003US-0451884P
                                                     09-JUN-2005
                                                                     WO2005051988-A2
                                                                                                                                                          11-AUG-2005
                                                                                                                                                                         AEA23691;
         (GETH )
                                                                                                                                                                                                                                                                                     3109
                                                                                                                                                                                                                                                                                                                   3049
                                                                                                                                                                                                                                                                     1001
                                                                                                                                                                                                                                                                                                                                                 2989
                                                                                                                                                                                                                                                                                                                                                                                                               2869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2749
                                                                                                                                                                                                                                                                                                                                                                                                                                             2809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2569
                                                                                                                                                                                                                                                                                                   981
                                                                                                                                                                                                                                                                                                                                                                941
                                                                                                                                                                                                                                                                                                                                                                                               921
                                                                                                                                           PRO
                                      -2004;
          GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                 ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysG.
                                                                                                                                                                                                                                                                                                                                                                                 HisValIleGluLysMetHisHisValAsnMetThrProGluPheLy
                                                                                                                                                                                                                                                                                                                                                                                                                     SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysS
                                                                                                                                                                                                                                                                                                                                                                                                                                             IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLy
                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTAACATTGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCA
                                                                                                                                                                                                                                 PheSerAspGluAsp
                                                                                                                                                                                                                                                                                    CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerT
                                                                                                                                          polypeptide
                                       2004WO-US006460
                                                                                                                                                          (first
                                                                                                                                                                                         DNA;
                                                                                                                                           DNA
                                                                                                                                                                                         3380
                                                                                                                                          SEQ
                                                                                                                                                                                         98
                                                                                                                                           IJ
                                                                                                                                           ŏ
                                                                                                                                                                                                                                                                                              hrLysLysGlnTyr 1000
||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                            erGlyGluAspIle 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGTCCAGGCCCGT 2628
                                                                                                             mmunostimulant;
                                                                                                                     athic;
                                                                                                                                                                                                                                                       CAGAATGCTGTTTA 3228
                                                                                                                                                                                                                                                                                                                                                           leAsnGlyGluIle 960
                                                                                                                                                                                                                                                                                                                                                                                 YLeuAspLeuPro 980
                                                                                                                                                                                                                                                                                                                                                                                                                                             rLysAsnAsnPro 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /sAlaIleHisCys 860
                                                                                                                                                                                                                                                                                                                                                   AAATGGTGAAATC 3048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     uGlnMetGlnSer 880
                                                                                                                                                                                                                                                                                                                                                                                         sGluLeuTyrIle 940
                                                                                                                                                                                                                                                                    rGluCysCysLeu 1020
                                                                                                                                                                                                                                                                                     AAAGAAACAATAC 3168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAGATGCAAAGT 2808
                                                                                                                                                                                                                                                                                                                                                                                                                GGGGAAGATATC 2928
```

중 음 경

1909

581

밁

1849

& B 8

1789

Д

1729

521

8 8 8

1669

음 성 음

1609

481

ঠ

1489

1549

ð

781

중 유

2509

유정

2449

761

당

2389

8 B

2329

ঠ

721

g

2269

δ Β

2209

S

음 성 음

661

2089

2149

중 유

2029

641

중 유

621

1969

```
Alignment Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-515-363C-2 (1-1025) x AEA23691
ફ
                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention relates to an isolated nucleic acid. The polypeptide, compound or composition, and methods are useful for diagnosing and treating an immune related disorder, e.g. systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, spondyloarthropathies, systemic sclerosis, idiopathic inflammatory myopathies, Sjogren's syndrome, systemic vasculitis, sarcoidosis, autoimmune hemolytic anemia, autoimmune or immune-mediated skin disease; including bullous skin diseases, erythema multiforme and contact dermatitis, psoriasis, lymphadenopathy, splenomegaly and leukopenia. The present sequence represents a human PRO polypeptide DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New nucleic acid encoding PRO polypeptide, useful for diagnosing and treating an immune related disorder, e.g. systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, autoimmune hemolytic anemia, or psoriasis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Abbas
Wu TD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No::
                                                               161
                                                                                                                              141
                                                                                                                                                             529
                                                                                                                                                                                              121
                                                                                                                                                                                                                             469
                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                          409
                                                                                                                                                                                                                                                                                                                                                         349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                         289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P
                                                                                                                                                                                                                                                                                                                        18
                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                       ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                   GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla
                                                                                                                                                                             LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu
                                                                                                                                                                                                                          GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACG
                                                                                                                                                                                                                                                                                                            LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGl
 PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySer
                                                                                                                   GluGluLeuLeuThrIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bodary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ŝ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
5311.00
100.0%
100.0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ą,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              644
                                                                                                               eGluAspArgAsnArgIleAlaAlaGluAsnAsnGlyAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         966pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Schoenfeld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-3380)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ဂ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3380
1025
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ∵
                                                                                                                                                                                                                                                                                                                                                                             YTrpThrArgGluPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ¥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The
                                                                 180
                                                                                                648
                                                                                                                                                                                              140
                                                                                                                                                                                                                              528
                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                             468
                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                             408
                                                                                                                                                                                                                                                                                                                                                                                                                          348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        288
                                                                                                                               160
                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                 뭕
                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                 ф
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                  중 유
                                                                        δ
                                                                                                               음 성
                                                                                                                                                                   밁
                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                 ્ર
                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1009
                                                                                                                                                                                                                                                                                                             1489
                                                                                                                                                                                                                                                                                                                                                                          1429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1069
                                                                                                                 1669
                                                                                                                                                                                1609
                                                                                                                                                                                                                                                1549
                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                              461
                                                                                                                                                                                                                                                                                                                                           441
                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAAGGGAAGAATATCATCATCTGCCTCCCTACAGGGAGTGGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValSo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAs
                                                                                                                                                                                                                                                                                                             LeuLysLysTrpTyrArgValIleGlyLeuSerGlyAspThrGlnL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerGluP
LysAlaGluGluHi
                                                                                                                                                                                 CTTCCTCAGATACTGGGACTAACAGCTTCACCTGGTGTTGGAGGGG
                                                                                                                                                                                               LeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyA
                                                                                                                                                                                                                                                                 TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnL
                                                                                                                                                                                                                                                                                                                                                                                              LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerA
                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProGluValValLysSerCy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCCCGGAGCCAGAACTCCAGCTCAGGCCTTACCAAATGGAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCCAAATCTGGAGAAGG
   lulleMetThrArg 560
                                                                                                                                                                                                     laThrLysGlnAla 500
||||||||||||
                                                                                                                                                                                                                                                                                                                                snlleMetArgHis 460
                                                                                                                                                                                                                                                                                                                                                                                                                                          leLeuGluAsnSer 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         euLysIleSerPhe 400
||||||||||||
TGAAAATATCATTT 1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hrArgValAlaVal 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATAACAGCAACATG 1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                erGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  luValTrpGlyMet 240
                                                                                                                     TTACTATTAAAACT 1728
                                                     GCAAGAAGTTTGCC 1788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      luPheGlnProPhe 380
||||||||||||
|AGTTCCAACCATTT 1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  laGlnProAlaLeu 320
||||||||||||
|CCAGCCAGCCTTG 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGAATCAGACACA 948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGTCCTCAAGTG 828
                                                                                                                                                                                                                                                                /sProValIlePro 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COGIYLYSVALIIE 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \landa | Alaa | 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .sAsnSerAsnMet 280
                                                                         'sLysLysPheAla 540
|||||||
                                                                                                                                                                                                                                                                                                                CATCATGAGGCAT 1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCAGCAAGAGCA 1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pGlyProGlnVal 220
                                                                                                                                                                                                                                                                                                                                                                            pPheSerLeuIle 440
                                                                                                                                                                                 CACGAAGCAAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              888
                                                                                                                                                                                    1668
                                                                                                                                                                                                                                                  1608
```

S 밁 δ

Ş g В र् В ঠ ф 5 밁 Ś 밁 ঠ 밁 Ş

```
1969
                                                                                                                                                                                                                 2569
                                                                                                                                                                                                                                                                                                     2449
                                                                                                                                                                                                                                                                                                                                               2389
                                                                                                                                                                                                                                                                                                                                                                                          2329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1789
                                                                                  2749
                                                                                                                                                                        2629
                                                                                                                                                                                                                                                          2509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1849
                                                                                                                                                                                                                                                                              781
                                                                                                                                                                                                                                     801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  681
                    901
                                                                                                                                                                                                                                                                                                                          761
                                                                                                                                                                                                                                                                                                                                                                    741
                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                                                                        701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                        AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IleMetGl
                                                                                 GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                                                                                                                                                                          CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                                                                                                                                                                                                       GlyLysIleAsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLysGlu
                                                                                                                                                                                                                                                                                                     AGTGAGTTCAAACCCATGACACAGAATGAACAAAAAGAAGTCATTAGTAAATTTCGCACT
                                                                                                                                                                                                                                                                                                                 SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThr
                                                                                                                                                                                                                                                                                                                                              PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TrpAlaIleG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGG
            SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle
                                                                                                                                         IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGGCCATTCAAATGGAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTGAAAACAATAAAATGTTGAAAAGGCTGGCTGAAAACCCCAGAATATGAAAATGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .nMetGluLysLysAlaAlaLysLysGlyAsnArgLysGluArgValCys
                                                     'rLysAsnAsnPro
||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1848
2928
                                         2868
                                                                                                       880
                                                                                                                                                 860
                                                                                                                                                                                                                 2628
                                                                                                                                                                                                                                     820
                                                                                                                                                                                                                                                          2568
                                                                                                                                                                                                                                                                               800
                                                                                                                                                                                                                                                                                                     2508
                                                                                                                                                                                                                                                                                                                                                2448
                                                                                                                                                                                                                                                                                                                                                                                          2388
                                                                                                                                                                                                                                                                                                                                                                                                              740
                                                                                                                                                                                                                                                                                                                                                                                                                                    2328
                                                                                                                                                                                                                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1908
                    920
                                                              900
                                                                                   2808
                                                                                                                             2748
                                                                                                                                                                        2688
                                                                                                                                                                                           840
                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                     760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             620
```

유

망 ঠ Вb S 맔

δδ β

5

8

д

ঠ

멍

ş

δ

밁 ঠ

ঠ

뭉

д 5

The invention relates to a method of screening for nucleic acid molecules that show altered expression in a first cell sample comprising comparing the gene expression profile of the sample with that of a second reference sample, where the first sample has been grown in the presence of butyrate or a related carbon source from which butyrate is directly or indirectly derived, but the reference sample has not. The invention also relates to a method of detecting at least one nucleic acid molecule associated with the initiation and/or progression of colorectal cancer in an animal, comprising providing a biological sample comprising at least one cell to be tested, contacting the sample with a ligand (preferably a hybridizing nucleic acid molecule) which binds to at least one nucleic acid and

멍 Ś 멍 Ş В ঠ д 8 da ঠ da ঠ

```
日
                                                                                                                                                                                                                                                                                                                                                                               장 유
                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           유장
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                             Screening for nucleic acid molecules exhibiting altered expression in cells grown in the presence of butyrate, and detection of the nucleic acid molecules or the encoded polypeptides in diagnosing colorectal
                                                                                                                                                         Corfe
                                                                                                                                                                                                                                                              gastrointestinal-gen.;
                                                                                                                                                                                                                                                                      Screening; gene irritable bowel
                                                                                                                                                                                                                                                                                                            25-AUG-2005
                                                                                                                                                                                      04-DEC-2003;
                                                                                                                                                                                                     03-DEC-2004;
                                                                                                                                                                                                                    16-JUN-2005
                                                                                                                                                                                                                                  WO2005054507-A2
                                                                                                                                                                                                                                                                                              Human
                                                                                                                                                                                                                                                                                                                           AEA36113;
                                                                                                                                                                                                                                                                                                                                         AEA36113
                                                                                                                                                                        (UYSH-)
                                                                                                                                                                                                                                                                                                                                                                                                                  1001
                                                                                                                                                                                                                                                                                                                                                                                                    3169
                                                                                                                                                                                                                                                                                                                                                                                                                                 3109
                                                                                                                                                                                                                                                                                                                                                                                                                                                               3049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         941
                                                                                                                                                                                                                                                                                             nucleic
                                                                                                                                                        В,
                                                                                                                                                                        AIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HisValIleGluLy8MetHisHisValAsnMetThrProGluPheL
                                                                                                                                                                                                                                                                                                                                         standard;
                                                                                                                                                                                                                                                                                                                                                                              PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAG
                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATT
                                                                                                                                                                                                                                                                                                                                                                                                             LysLysTrpVal
                                                                                                                                                                                                                                                                                                                                                                                                                                 CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IleCysLysCy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTAAGAGAAAACAAAGCACTGCAAAAGAAGTGTGCCGACTATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnI
                                                                                                                                                                                                                                                                                                                                                                       TTTAGTGATGAGGAT
                                                                                       Page
                                                                                                                                                                                      2003GB-00028048
                                                                                                                                                                                                      2004WO-GB005078
                                                                                                                                                                                                                                                                                             acid
                                                                                                                                                                                                                                                                                                            (first
                                                                                                                                                                                                                                                               expression; colorectal tumor;
syndrome; gastrointestinal di
l-gen.; antiinflammatory; ds.
                                                                                                                                                                                                                                                                                                                                         DNA;
                                                                                                                                                                                                                                                                                             sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      266pp;
                                                                                                                                                                                                                                                                                              #45
                                                                                                                                                                                                                                                                                                                                         ВP
                                                                                       English.
                                                                                                                                                                                                                                                                        disease;
                                                                                                                                                                                                                                                                        cyt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LysGluLeuTyrIle
|||||||||||
AAGGAACTTTACATT
                                                                                                                                                                                                                                                                       Crohns disease; ostatic;
                                                                                                                                                                                                                                                                                                                                                                                                     CAGAATGCTGTTTA 3228
                                                                                                                                                                                                                                                                                                                                                                                                             erGluCysCysLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                   CAAAGAAACAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTTAGATTTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     leAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         lyLeuAspLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                           rLysLysGlnTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAATGGTGAAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                              3108
                                                                                                                                                                                                                                                                                                                                                                                                                   1020
                                                                                                                                                                                                                                                                                                                                                                                                                                  3168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3048
                                                                                                                                                                                                                                                                                                                                                                                                                                                1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        940
```

```
Alignment :
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                   Ś
                                                                                밁
                                                                                                         8
                                                                                                                                    멍
                                                                                                                                                              5
                                                                                                                                                                                              밁
                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cc detecting the presence of at least one molecule in the sample, a method cc and/or progression of colorectal cancer in an animal comprising providing cc a biological sample comprising at least one cell to be tested, contacting cf the sample with at least one ligand that specifically binds at least one coll to be tested comprising cc polypeptide encoded by a nucleic acid or a variant polypeptide comprising cc an amino acid sequence which varies by the addition, delection or cc substitution of at least one amino acid residue and detecting the presence of the polypeptide in the sample, a method of screening for capents that modulate the activity of at least one polypeptide encoded by a gene associated with the initiation and/or progression of colorectal cancer comprising forming a preparation comprising at least one addition, deletion or substitution and at least one agent to be tested and determining the activity of the agent with respect to cc activity of the polypeptide, and an antibody or its effective binding cc portion identified by the method, for use as a pharmaceutical. The cc activity of progression in a cell sample, and for detecting a nucleic acid and ca polypeptide expression in a cell sample, and for detecting a nucleic acid and ca polypeptide expression of colorectal cancer and are useful for detecting or cc ansociated with the initiation cc allow useful for screening for agents that modulate the activity of at least one polypeptide encoded by a gene associated with the initiation cc allowed screening for agents that modulate the activity of at least one polypeptide encoded by a gene associated with the initiation cc allowed screening for agents that modulate the activity of at cast collection of colorectal cancer. The methods could also be used to color the colorectal cancer. The methods could also be used to color the colorectal cancer. The methods could also be used to consider the coloral screening two for fiber consumption, as colorectal cancer and are colored by the method are considered wit
                           В
                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-515-363C-2 (1-1025) x AEA36113
                                                                                                            101
                                                                                                                                       409
                                                                                                                                                                                              349
                                                                                                                                                                                                                                                                                                                                                                169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scores:
                                                                                                                                                                                                                                                     289
                                                                                                                                                                                                                                                                                                             229
                                                                                                                                                                    81
                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaGluAsnAsnGlyAsn
                                            LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu
                                                                                               AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGlnLeuLeuAsnLeu
                                                                                                                                                      GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr
                                                                                                                                                                                                            LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal
                                                                                                                                                                                                                                                      GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                                                                                                                                                                                                                                                                                                                          ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                                                                                                                                                               1153 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                              0
5311.00
100.0%
100.0%
100.0%
                                                                                  CCATCGTTTGAGAACGCTCATGATGAATATCTCCAACTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ü
                                                                                                                                                                                                                                                                                                                                                                                                                       (1-3380)
                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                         <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                    3380
1025
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               u; o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Other;
                                                                                                                                                                    100
                                                      140
                                                                                                             120
                                                                                                                                                                                                                                                                                                             288
                                                                                                                                                                                                                                                                                                                                                                  228
                                                                                                                                                                                                408
                                                                                                                                                                                                                          90
                                                                                                                                                                                                                                                      348
                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                        40
                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                              밁
                                                                                                                         S
                                                                                                                                                       В
                                                                                                                                                                            Ş
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                          र्
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   श्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                               S
                                                                                                                                                         1489
                                                                                                                                                                                                               1429
                                                                                                                                                                                                                                                                     1369
                                                                                                                                                                                                                                                                                                                           1309
                                                                                                                                                                                                                                                                                                                                                                                 1249
                                                                                                                                                                                                                                                                                                                                                                                                                                       1189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      589
                                                                                                                                                                                   441
                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                 401
                                                                                                                                                                                                                                                                                                                                                      381
                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnVt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATTGCTCAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG
 LysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPheThrIleLysThr 520
                                                       LeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyA
                                                                                                            TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnL
                                                                                                                                                        ATCATTGATGAATGTCATCACCAACAAAGAAGCAGTGTATAATA
                                                                                                                                                                       LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerA
                                                                                                                                                                                                                                                                     CCAGAAGTTGTCAAGTCCTGTGATATTATTATCAGTACAGCTCAAA
                                                                                                                                                                                                                                                                                   GTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCATTT 1308
                                                                                                                                                                                                                                                                                                                                                                                                 ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPhe 380
                                                                                                                                                                                                                                                                                                                                                                                                                                       TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAAGCATCTGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGTTTGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGCCTTACCAAATGGAAGTTG
                                                                                                    CAAGAAAGAAAACA
                                                                                                 ysProValIlePro 480
                                                                                                                                                                        \snIleMetArgHis 460
                                                                                                                                                                                                                                  spPheSerLeuIle 440
                                                                                                                                                                                                                                                                                    leLeuGluAsnSer 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                        roGlyLysVallle 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAGAGTGGCTGTT 1188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCAGCCAGCCTTG 1128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     alAlaAlaArgAla 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    isAsnSerAsnMet 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 luValTrpGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            luLeuThrGlySer
                                              CCACGAAGCAAGCC 1668
                                                                                                                                                          ACATCATGAGGCAT 1548
                                                                                                                                                                                                                                                                       TCCTTGAAAACTCC 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGAAAAGTTATA 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATAACAGCAACATG 1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGTCCTCAAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       laGlnProAlaLeu 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGTCTGGGGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTTAACAGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nTrpPheSerAla 180
                                                                .aThrLysGlnAla 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     pGlyProGlnVal
                                                                                                                                                                                                                CTTTTCCCTCATT 1488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGAATCAGACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       828
```

```
1969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1729
                                                                                                                                                             2509
                                                                                                                                                                                                   2449
                                                                                                                                                                                                                                           2389
                                                                                                                                                                                                                                                                                  2329
                                                                                                                                                                                                                                                                                                                                                                                                          2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1669
                                                                              2629
                                                                                                                                                                                                                                                                                                                          2269
                                                                                                                                                                                                                                                                                                                                                                  2209
                                                                                                                                                                                                                                                                                                                                                                                                                                                2089
                                                                                                                                                                                781
                                                                                                                                                                                                                      761
                                                                                                                                                                                                                                                               741
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                              701
                                                                                                                                                                                                                                                                                                                                                                                    681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspAlaTy:
                                                                                                                                                            IleGluHisGluThrValAsnAspPheArgGluLysMetMetTy
                                                                                       GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                                                                                          9
                                                                                                                                                                                                   SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThr
                                                                                                                                                                                                                                                                                                                         LeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                 PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                  AspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAGAACATTTGAGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IleGlnThrTyrCy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArg
                                                                                                                                                                                                                                                       AsnGluLysPheAlaGluVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                 IleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAGCTGAAGAACACATTTTAAAACTATGTGCCAATCTTGATGCATTTACTATTAAAAACT
                                                                                                                                   /8AsnIleValI]
||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGTTTGCAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /sGlnMetSerProMetSerAspPheGlyThrGlnProTyrGluGln
                                                                                                                      .lGlyValLysAlaHisHisLeuIleGlyAlaGlyHisSer
||||||||||||||||||||||
|AGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rggaactcaaccctatgaacaa
                                      YrLysAlaIleHisCys
||||||||||||||
|TAAAGCTATACATTGT
                                                                                                 840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                   880
                                                            960
                                                                              2688
                                                                                                                      2628
                                                                                                                                         820
                                                                                                                                                             2568
                                                                                                                                                                                800
                                                                                                                                                                                                     2508
                                                                                                                                                                                                                      780
                                                                                                                                                                                                                                                                                  2388
                                                                                                                                                                                                                                                                                                      740
                                                                                                                                                                                                                                                                                                                           2328
                                                                                                                                                                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                   2268
                                                                                                                                                                                                                                                                                                                                                                                     700
                                                                                                                                                                                                                                                                                                                                                                                                          2208
                                                                                                                                                                                                                                                                                                                                                                                                                             680
                                                                                                                                                                                                                                                                                                                                                                                                                                                 2148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  580
                                                                                                                                                                                                                                                               760
```

음 동

The invention polypeptide. 7

The polypeptide,

isolated nucleic , agonist or an a

: acid encod antagonist,

ding a PRO, antibody,

1;

SEQ

IJ

Ö

3369;

158pp;

English.

밁

음 성 음

중 유

5 뭥

음 성 음 성

8 8 8 8 8 8

장 음 양 음

중 음 중

밁 \$

```
RESULT
ADY1756
XX
AD
XX
AD
XX
AD
XX
AD
XX
AD
XX
AD
AD
XX
AD
AD
XX

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B 8 8 8 8 B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     음 성 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TT 6
7563
ADY17563
                                                                                        New nucleic a treating an : rheumatoid a:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antiinflammatory; Immune disorder; Dermatological; Immun Antirheumatic; Antiarthritic; Osteopathic; Hemostatic; Antithyroid; Antidiabetic; Nephrotropic; CNS-Gen.; Hepat Virucide; Gastrointestinal-Gen.; Antipsoriatic; Antiastl Antiallergic; ds; gene; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                             11-AUG-2003;
                                                                                                                                                                                                                                                                                                             11-AUG-2004;
                                                                                                                                                                                                                                         (GETH
                                                                                                                                                                                                                                                                                                                                                                                      WO2005016962-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-MAY-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADY17563;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3049
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2989
                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   881
                                                                                                                                                                    2005-182330/19
                                                                                                                                                                                                                                          GENENTECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATGTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTTAGTGATGAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAAAAGTGGGTAGAATTACCTATCACATTTCCCAATCTTGACTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CysLeuLysIleArgAsnPheValValPheLysAsnAsnSerT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HisValIl
                                                                                       c acid encoding PRO polypeptide, useful for diagnosing and nimmune related disorder, e.g. systemic lupus erythematosus, arthritis, osteoarthritis, thyroiditis, or diabetes mellitus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         മ
                                                                                                                                                                                                                                                                              2003US-0493546P
                                                                                                                                                                                                                                                                                                               2004WO-US026249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRO
                                                                                                                                                                                                 Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .eGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polypeptide,
                                                                                                                                                                                                    Ouyang
                                                                                                                                                                                                      Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВÞ
                                                                                                                                                                                                      Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                      ΜÞ,
                                                                                                                                                                                                      Wood
                                                                                                                                                                                                        WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mosuppressive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                totropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               erGluCysCysLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hrLysLysGlnTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCTTAGATTTGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  erGlyGluAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YrLysAsnAsnPro
||||||||||||
|ACAAGAATAACCCA
                                                                                                                                                                                                        Wu TD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGAATGCTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAAATGGTGAAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .eAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAGAAACAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YLeuAspLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGGAAGATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3168
```

e.g. systemic lupus erythematosus, rneumacos, elg. systemic lupus erythematosus, rneumacos, resumacos, resumac	composition, and method are useful for diagnosing and treati
5	 -
101 SEPTIONINE PROGRAMMENT CONCERNATION CONTROLLED TO THE CONCENTION OF THE CONCENTI	

```
3103
                       1001
                                                                                                                                             3043
                                                                                                                                                                                           2983
                                                                                                                                                                                                                                            2923
                                                                                                                                                                                                                                                                                                                                                                                         2743
                                                                                                                                                                                                                                                                                                                                                                                                                                         2683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2563
                                                                                                                                                                                                                                                                                           2863
                                                                                                                                                                                                                                                                                                                                           2803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2143
                                                                                                                                                                                                                   921
                                                                                                                                                                                                                                                                                                                  881
                                                                                                                                                                                                                                                                                                                                                                  861
                                                                                                                                                                                                                                                                                                                                                                                                                 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             741
                                                                                                                     961
                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                           IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro
                                                                                                                                                                                                                                                                                                                                                       ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetGlnSer
                                                                                                                                                                                                                                                                                                                                                                                          ATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AsnGluLysPheAlaGluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHisSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGACCAAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAATCAGCACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ASDASDLEULYSLYSPYOLEULYSLEUASDGluThrASDAYGPHELEUMETTHYLEUPHE
                                                                                                               IleCysLy
                                                                                                                                                                                             CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATT
                                                                                                                                                                                                                                                         SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCy
                                                                                                                                                                                                                                                                                                                                                                                                       IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATGAAAAATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTGAAAACAATAAAATGTTGAAAAGGCTGGCTGAAAACCCCAGAATATGAAAATGAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /$A$nIleValIleArgTyrGlyLeuValThrA$nGluIleAlaMetValGlnAlaArg
                                               'sCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                          uAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAAACCCATGACACAGAATGAACAAAAAGAAGT
                                                                                                                                                                                                                                            CTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATC
                                                                                                                                              ATCAAATAAATGGTGAAATC
                                                                                                                                                                                                                                                          /sSerGlyGluAspIle
                        1020
                                                                      1000
                                                                                                                                                                                                                                            2982
                                                                                                                                                                                                                                                                                            2922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              820
                                                3222
                                                                                               3162
                                                                                                                     980
                                                                                                                                              3102
                                                                                                                                                                     960
                                                                                                                                                                                            3042
                                                                                                                                                                                                                    940
                                                                                                                                                                                                                                                                    920
                                                                                                                                                                                                                                                                                                                  900
                                                                                                                                                                                                                                                                                                                                           2862
                                                                                                                                                                                                                                                                                                                                                                  880
                                                                                                                                                                                                                                                                                                                                                                                         2802
                                                                                                                                                                                                                                                                                                                                                                                                                  860
                                                                                                                                                                                                                                                                                                                                                                                                                                         2742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            720
```

유성

밁

중 음

S

유 상 당 상 당

8 8

8

В ठ 밁 8

ঠ

ঠ

41

etGlnAlaValGlu 60

402

343

밁 ঠ 멍 ঠ 45 45 45 45

र्

ਰ 8 뮍 δ ф ঠ dd ð

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                        RESULT 7
ADY20376
ID ADY20376;
XX
AC ADY20376;
XX
DT 05-MAY-20;
XX
DNA encod:
XX
Antirheum;
XW Antirheum;
XW Antithyro;
XW Antialler;
XX
ANTICALE;
XX
CC The inventoc
CC composition
CC related di
CC related di
CC arthritis
XX
Sq Sequence
                                                                                                                         Best I
Query
DB:
д
                  Ş
                                                 뮍
                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                 R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     日
                                                                                                   -09-515-363C-2
                                                                                                                                                                                                                                              The invention relates to an isolated nucleic acid encoding a PRC polypeptide. The polypeptide, agonist or an antagonist, antibody composition, and method are useful for diagnosing and treating a related disorder, e.g. systemic lupus erythematosus, rheumatoid arthritis. The present sequence represents a PRO polypeptide.
                                                                                                                                                                                                                                                                                                                                                New nucleic acid encoding PRO polypeptide, useful treating an immune related disorder, e.g. systemic rheumatoid arthritis, osteoarthritis, thyroiditis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Antiinflammatory; Immune disorder; Dermatological; Immunosuppressive; Antirheumatic; Antiarthritic; Osteopathic; Hemostatic; Antianemic; Antithyroid; Antidiabetic; Nephrotropic; CNS-Gen.; Hepatotropic; Virucide; Gastrointestinal-Gen.; Antipsoriatic; Antiasthmatic; Antiallergic; ds; gene; diagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-AUG-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-AUG-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO2005016962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-MAY-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADY20376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           encoding
                                                    223
                                                                                                                                                                                                                                                                                                                                                                                                   2005-182330/19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens
                          21
                                                                          \mathbf{\mu}
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENENTECH
                                                                                                                                                                                                                                                                                                                          SEQ
                                            ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheSerAspGluAsp
               ArgValLysMetTyrIl
                                                                MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                  (1-1025) \times
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                           ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2003US-0493546P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2004WO-US026249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRO
                                                                                                                                                                                                                                                                                                                                                                                                                         Ħ,
                                                                                                                                                                                                                          1157
                                                                                                                          0
5307.00
100.0%
99.9%
99.9%
                                                                                                                                                                                                                                                                                                                          6182; 158pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           polypeptide,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                         Ouyang
                                                                                                 ADY20376
                                                                                                                                                                                                                         A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3297
               |eGlnValGluProValLeuAspTy
|||||||||||||||||
                                                                                                                                                                                                                          673
                                                                                                                                                                                                                                                                                                                                                                                                                           Σ
                                                                                                                                                                                                                           ü
                                                                                                                                                                                                                                                                                                                                                                                                                           Williams
                                                                                                                                                                                                                                                                                                                          English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ
                                                                                                   (1-3434)
                                                                                                                                                                                                                            768
                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IJ
                                                                                                                                                                                                                           <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                           ΜP,
                                                                                                                                                                                                                            836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6182
                                                                                                                                                                                                                           Τ,
                                                                                                                                                                                                                                                                                                                                                                                                                            Wood
                                                                                                                                                                                                                            0
                                                                                                                           3434
1024
1
0
0
                                                                                                                                                                                                                           ;
                                                                                                                                                                                                                                                                                                                                                  for diagnosing and
c lupus erythematosus,
, or diabetes mellitus.
  /rLeuThrPheLeuProAla 40
                                                                                                                                                                                                                                                                                                                                                                                                                            Σij,
                                                                                                                                                                                                                            0
                                                                          es
                                                                                                                                                                                                                            Other;
                                                                                                                                                                                                                                                                                        ding a PRO antibody,
                                                                  erCysPheArgAla 20
                                                    CGTGCTTCAGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                            Wu TD;
                                                                                                                                                                                                                                                                          an immune
    342
                                                    282
```

6 8
6.1 LealleuicauserThriteuOlityselfVelTrpHisteseuOlTrpThritargGluPheVal 403 CTCCTCAACACCTCTTGAACACACCTCAACACACTCTGAACACACAC
5
1413 CICTITMACTICADAMICGANAMICGACOMACTIC CITYCATATORIA CIT

r, useful for r for breast

```
US2003099974-A1
                                          18-JUL-2001;
                                                                                                                                                                                                                                                                                                                                        02-DEC-2004
(MILL-) MILLENNIUM PHARM INC
                                                                                                                                                                                                                                                                                             cancer
                                                                                                                                                                                                                                                      breast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTAACATTGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTCCAGGCCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                          standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCysLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCGAACATGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAAAAATAAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATAATGGAAAAGAAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                          2001US-0306220P
                                                                                  2002US-00198846
                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \uHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                                                                                                                                                                            related
                                                                                                                                                                                                                                                      tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                             marker,
                                                                                                                                                                                                                                                                                                                                                                                                                         3928
                                                                                                                                                                                                                                                      cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1025
                                                                                                                                                                                                                                                                                                                                                                                                                          ВP
                                                                                                                                                                                                                                                                                            seq
                                                                                                                                                                                                                                                                                               p.
                                                                                                                                                                                                                                                                                               13042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           $
                                                                                                                           음 중
                                                                                                                                                                                              뮹
                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                            뫄
                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-515-363C-2 (1-1025) x ACN91892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to an isolated polypeptide (I) associated with breast cancer which is encoded by a nucleic acid molecule comprising a nucleotide sequence (S1). Further disclosed is an antibody that binds to the polypeptide of the invention. The activity of the polypeptide of the invention may be described as cytostatic. The antibody is useful for detecting the presence of (I) in a sample. Nucleic acid molecules of the invention are useful in the detection of breast tumours. (I) is useful as a marker for breast cancer and in breast cancer therapy. Sequences given in records ACN78851-ACN92934 represent nucleic acid markers associated with breast cancer. Note: The sequence listing does not form part of the specification but may be obtained in electronic format from the USPTO web site at seqdata.uspto.gov/sequence.html?DocID=20030099974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel isolated polypeptide associated with breast detecting presence of polypeptide in sample, as a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lillie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                            1031
                                                                                   161
                                                                                                                                                                     141
                                                                                                                                                                                                               971
                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                               911
                                                                                                                                                                                                                                                                                                                                                                                   851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         671
                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     791
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    731
                                                                                                                                                                                                                                                                                                                                                                                                                          81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'n
                                                                                                                                                                                                                                                                                               GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaG
                                                                                                                                                                                                                                       LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuT
                                                                                                                                                                                                                                                                                                                                                                                                           LeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpT
{\tt PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGlnGluBeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluBeuAsnGluB
                                                                        GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluA
                                                                                                                                                                                                                                                                                                                                                                                   GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGA
                                                                                                                                                                                                                CTTCAGCCCACTCTGGTGGACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ķ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
5303.(
99.9%
99.8%
99.8%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13042;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Steinmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-3928)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>،</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>~</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ή,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ų;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Other;
```

RESULT 8
ACN91892
ID ACN9
XX
AC ACN9
XX
DT 02-D
XX
DE Brea
XX
Canc
XX
Cos
PN US20
XX
PD 29-N
XX
PF 18-J
XX
PR 18-J
XX
PA (MII

Cancer;

Breast

Homo

luLeuThrGlySer 200

snTrpPheSerAla 180

1150

AAACAATGGAAAT

1090 160 1030

uAsnAsnGlyAsn ||||||||||

밁 ঠ

3283

hrArgGluPheVal

80 790

TCGGGAATTCGTG

nLeuLeuAsnLeu

120 910 100 850

ACTGCTGAACCTC

970

nProGluLeuThr

CCCTGAGCTCACG

etGlnAlaValGlu |||||||||||

60

erCysPheArgAla

670 20

nrPheLeuProAla

CTTTCTGCCTGCA

730 40

ACN91892

ACN91892;

유

멍 5

3163

981

1001

В S

3103

961

В ঠ 8 S

3043

2983

921

д S 멍 S

2863

8 ঠ В ঠ

2803

861

881

2743

841

д S

2683

명 S 밁

2623

821

8	ф	\$ {	용 성	B 성	A 4	99 89	40	DB 99	B 8	g &	D Q	B &	B &	9d VQ	B 8	ß &	B 8	9 8	שמ
541 IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArg 560		521 VallysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla 54	501 LYSAlaGluGluHisIleLeuLYSLeuCYSAlaAsnLeuAspAlaPheThrIleLYSThr 520 	481 LeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThrLysGlnAla 500 	461 TyrLeuMetGlnLy8LeuLy8A8nA8nArgLeuLy8Ly8GluA8nLy8ProValllePro 480 	441 IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAsnIleMetArgHis 460 	421 LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeuIle 440 	401 ProGluValValLysSerCysAspIleIleIleSerThrAlaGlnIleLeuGluAsnSer 420 	381 LeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSerPhe 400	361 ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPhe 380 	341 TyrileAlaLysAspHisLeuAspLysLysLysAlaSerGluProGlyLysValIle 360 	321 GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysThrArgValAlaVal 340	301 SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeu 320 	281 GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaAlaAagala 300 	261 SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnMet 280	241 GluAgnAgnSerSerGluSerSerPheAlaAgpSerSerValValSerGluSerAgpThr 260	221 GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGlyMet 240	201 AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 220	
D z	O	3 Q	Db	S B 7	S B ;	S B :	S B &	S B &	2 B 4	S B 7	S B 8	S B 8	S B 7	Q B 4	P &	S B :	סע ש	δ B :	ον Β.
1 TCACTAATAACTTTCCTTTGCAAAAACTGCAGTGTGCTAGCCTGTTCTGGGGAAGATATC 3	lGGAAAAAGAAAAIGAAAAACCAAAGAAAAAAAIAIIGCCAAGGAIIACAAGAAIAACCCA 331 aulleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle 920	88	91 GTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAAGT					or Sergiuffichysfrone (international) of the contract of the c											2231 ATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTCTAGAAATAATGACAAGG 2290 561 IleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyThrGlnProTyrGluGln 580

```
음 상 음
                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                       $
                                                                                                                                                                                                                                                                                                                                                                                                                                      ठ
The present sequence is the coding 116kDa protein and has homology to its coding sequence are useful for
                                                                                        Bahr
                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                            Human; RH116; RNA helicase; cytostatic; virucide; anti-HIV; immunosuppressive; immunostimulatory; antirheumatic; antiarthritic; antiarteriosclerotic; osteopathic; antidiabetic; hepatrotropic; antiinflammatory; cancer; infection; HIV; hepatitis; genetic diseas autoimmune disease; graft rejection; vaccine; ss.
                                        New polypeptide, useful for treati inflammation, and drug screening, homologous to RNA helicase.
                                                                                                    (ISTA-)
                                                                                                                                      11-MAY-2001;
                                                                                                                                                                                                                                                                                                 ABA04908
                            Claim
                                                                                                                                                    15-NOV-2001.
                                                                                                                                                                  WO200185955-A1
                                                                                                                                                                                                                                                                       Human
                                                                                                                                                                                                                                                                                    05-MAR-2002
                                                                                                                                                                                                                                                                                                               ABA04908
                                                                    I; 2002-082898/
PSDB; AAM47798.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     3431
                                                                                                                                                                                                                                                                                                                                                                    3611
                                                                                                                                                                                                                                                                                                                                                                                                                          3491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3371
                                                                                                                                                                                                                                                                                                                                                                                  1001
                                                                                        ์อ
                                                                                                                                                                                                                                                                                                                                                                                                            981
                                                                                                                                                                                                                                                                                                                                                                                                                                       961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             921
                                                                                                    ISTAC.
                           Page
                                                                                                                                                                                                                                                                                                               standard;
                                                                                                                                                                                                                                                                                                                                                                                              IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                                                                                  PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACA
                                                                                        Cocude
                                                                                                                                                                                                                                                                                                                                                                            LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCysLeu
                                                                                                                                                                                                                                                                       helicase
                                                                                                     PASTEUR
                                                                                                                                       2001WO-FR001441.
                                                                                                                                                                             Location/Qualifiers
155. .3232
/*tag= a
/product= "Human RH1:
                                                                                       Ç
                                                                                                                                                                                                                                                                                                              cDNA;
                                                                                                                                                                                                                                                                       RH116
                                                                                                                                                                                                                                                                                    entry)
                                                                                                     LILLE
                           114pp;
                                                                                                                                                                                                                                                                                                                                                      1025
                                                                                                                                                                                                                                                                                                               3372
                                                                                                                                                                                                                                                                                                                                         3685
                                                                                                                                                                                                                                                                      coding
                                                                                        Þ
                                               treating and dia
ening, comprises
                            French.
                                                                                                                                                                                                                                                                                                               ЧB
                                                                                                                                                                                                                                                                      sequence.
sequence for human RH116. RNA helicases (DEXH box). treating cancer; acute or
                                               diagnosing
ses a human
                                               cancer or polynucleotide
 RH116 is a
RH116 and
chronic
                                                                                                                                                                                                                                      disease;
                                                                                                                                                                                                                                                                                                                                                                     3670
                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                               3610
                                                                                                                                                                                                                                                                                                                                                                                                             1000
                                                                                                                                                                                                                                                                                                                                                                                                                           3550
                                                                                                                                                                                                                                                                                                                                                                                                                                        980
                                                                                                                                                                                                                                                                                                                                                                                                                                                     3490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             940
                þ
                                                                                                                                                                                                                                                                                                                                                                                                     Best I
Query
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment (
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                               ঠ
                                                                              음 성
                                                                                                       밁
                                                                                                                     5
                                                                                                                                      뫄
                                                                                                                                               5
                                                                                                                                                             뮹
                                                                                                                                                                            ঠ
                                                                                                                                                                                            뮍
                                                                                                                                                                                                      5
                                                                                                                                                                                                                    몽
                                                                                                                                                                                                                                  ક
                                                                                                                                                                                                                                                  음 중
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                          몽
                                                                                                                                                                                                                                                                                                                                                                                                                          Percent
           5
                         뮹
                                     중 유
                                                                                                                                                                                                                                                                                                                                                                                                            ent Similarity:
  Local Similarity:
y Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                       635
                                                       815
                                                                                                            695
                                                                                                                                                                  575
                                                                                                                                                                               141
                                                                                                                                                                                             515
                                                                                                                                                                                                                        455
                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                   395
                                                                                                                                                                                                                                                                              335
                                                                                                                                                                                                                                                                                                                                                              155
                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
   935
                                                                                  755
                                                                                               201
                                                                                                                         181
                                                                                                                                                     161
                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                         275
                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                            \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                            3372
                                                                                                                                                                                                                                                   GAGGCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽₽;
```

```
និនិនិនិនិនិ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-515-363C-2 (1-1025) x
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         infections (especially b diseases; (auto)immune d arteriosclerosis, osteop to prevent graft rejectifor inducing, or increas
                                        GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaGluAsnAsnGlyAsn
                                                                                                                                                                                                                                                                                         CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGG
                                                                                                                                                                                                                                                                                                                                 AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGl
                                                                                                                                                                                                                                                                                                                                                                                                                   LeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpTI
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCT
                                                                                                                        AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAs
                                                                                                                                                               PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG
                                                                                                                                                                                                                    GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAs
                                                                                                                                                                                                                                                  GAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                        GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSo
SerLeuAlaGluGlySerValSerCysLe
                                                                                                                                                                                                         LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cially by HIV or hepatitis B or (immune diseases (particularly rhe, osteoporosis and diabetes, but rejection. RH116 and its coding increasing, the immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1157
                                                                                                                                                                                                                                                                                                                                                                            CGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
5285.(
99.7%
99.5%
99.5%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABA04908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1 - 3372)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
              /sLeuAspG1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      y rheumatism, arthritis, but many others listed) and ding sequence are also useful onse to a vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or C);
              LeuGlyHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3372
1020
2
3
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ų;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Other;
                                         SerGluSerAspThr
||||||||||||||
|CAGAATCAGACACA
                                                                                                                                                                                                                                                                                                                                   GlnLeuLeuAsnLeu
||||||||||||
|CAACTGCTGAACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                    ThrargGluPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SerCysPheArgAla
                                                                                                                                                                                                                                                                                                                                                                            AsnProGluLeuThr
                                                                                                                                                                  AGTTAACAGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          etGlnAlaValGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTTTCTGCCTGCA
 isAsnSerAsnMet 280
                                                                                            luValTrpGlyMet
                                                                                                                                                                                                                      3nTrpPheSerAla 180
|||||||||||||
                                                                                                                                                                             luLeuThrGlySer
                                                                                                                                                                                                                                                  AAACAATGGAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \rPheLeuProAla 40
                                                                                                                          TEGTCCTCAAGTG
                                                                                                                                                                                                                                                                                            TAAGTGCATGGAG
                                                                                                                                                                                                                                                                                                   pLysCysMetGlu
                                                                                  GGTCTGGGGCATG
                                                                                                                                     pGlyProGlnVal
                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                                                                                                                                                                                                                                                             334
                                          934
                                                                                                                                             220
                                                                                                                                                                                    200
                                                                                                                                                                                                                                                   634
                                                                                                                                                                                                                                                                       160
                                                                                                                                                                                                                                                                                           574
                                                                                                                                                                                                                                                                                                               140
                                                                                                                                                                                                                                                                                                                                   514
                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                             454
                                                                                                                                                                                                                                                                                                                                                                                               100
                                                                                                                                                                                                                                                                                                                                                                                                                     394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     274
                                                             260
                                                                                  874
                                                                                                    240
                                                                                                                         814
                                                                                                                                                                                                          694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             214
                                                                                                                                                                  754
```

• • •								
601 AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle 620	I eGlnThrTyrCy8GlnMetSerProMetSerAspPheGlyThrGlnProTyrGlu	55 ÀAÀGCTGAÁGÁACACÁTTTTÁÁAÁCTATGTGCCAÁTCTTGATGCATTTACTATTAAAACT 1 21 VallysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla 5 21 VallysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla 5 21 VallysGluAsnLeuAspGlnLeuLysAsaGlnIleGlnGluProCysLysLysPheAla 5 21 VallysGluAsnLeuAspGlnHlllllllllllllllllllllllllllllllllll		15 CTCTTAAACTTGGAAAATGGAGAGATGCTGGTGTTCAATTGTCAGACTTTTCCTTCATT 14 41 IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAsnIleMetArgHis 46	95 TTGAAGAATGGTATCGTTATTGGATTAAGTGGTGATACCCAACTGAAAATATCATTT 13 01 ProGluValValLy8SerCy8AspIleIleIleSerThrAlaGlnIleLeuGluAsnSer 42	5 TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGCCTGGAAAAAGTTATA 1 1 ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPhe 3 1	055 TCCCCGGAGCCAGAACTCCAGCTCAGGCCTTACCAAATGGAAGTTGCCCAGCCAG	281 GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaArgAla 300
Q D Q D	& B & B &	5 B & B &	D Q D Q 5	\$ \$ B \$	Q Q Q dd	0 0 0 0 0 0 0	B & B &	Qy Qy
3035 ATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCT 3094 981 CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTyr 1000	1	881	HISCYS ACATTGT GlnSer	801 CY8A8nIleValIleArgTyrGlyLeuValThrA8nGluIleAlaMetValGlr	761 SerGluPheLysProMetThrGlnAsnGluGlnLysGluVallleSerLysPhell	721 GlyIleIlePheThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThrGlu 740	681 PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys 700	641 IleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAspGlu 660

8 8 8 8 8 8 8 8 8 8 8

8 B 8

```
RESULT 10
ADC30823
XX
ADC30823
XX
ADC30823
XX
ADC30823
XX
ADC30823
XX
ADC30823
ADC3
XX
Huma
KW Huma
KW hiod
KW neui
KW mole
KW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
The invention relates to 971 novel human cDNA sequences (ADC29919-CC ADC30889) and the polypeptides they encode (ADC30890-ADC31860). The invention also relates to nucleic acid sequences over 99% identical with the novel human cDNAs. The invention additionally encompasses expression vectors and host cells comprising a nucleic acid of the invention; the recombinant production of a polypeptide of the invention; an antibody against a polypeptide of the invention; an ethods of identifying a compound which binds to a polypeptide of the invention. The invention further discloses methods of peventing, treating or ameliorating a medical condition; kits comprising polynucleotide probes and/or monoclonal antibodies for carrying out the methods of the expression or activity of the polynucleotide and/or polypeptide; and 767 contig sequences corresponding to the cDNA sequences of the invention (ADC33394). The nucleic acids and polypeptides of the invention are identification of mutations responsible for genetic disorders or other traits, for assessing biodiversity, and in producing many other types of data and products dependent on DNA and amino acid sequences. They are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                treating co
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 200
P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; diagnostic; drug screening; forensics; gene mapping; biodiversity assessment; Parkinson's disease; Alzheimer's disease; neurodegenerative diseases; anaemia; platelet disorder; wound; burns; ulcers; osteoporosis; autoimmune disease; cancer; molecular weight marker; food supplement; antiparkinsonian; nootropic; neuroprotective; antianaemic; anticoagulant; thrombolytic; vulnerary; antiulcer; osteopathic; immunosuppressive; antiinflammatory; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tang TY, Zhang J,
Zhou P, Ghosh M,
Haley-Vicente D, |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24-SEP-2001; 2001US-0324631P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADC30823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (HYSE-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24-SEP-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-APR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO2003029271-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human novel cDNA sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               polynucleotide and polypeptide useful for diagnosing, preventing sting conditions such as neurodegenerative diseases, anemias, platorders, wounds, burns, ulcers, osteoporosis, autoimmune diseases or conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2003-371981/35
)B; ADC31794.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTAGTGATGAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2002WO-US030474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J, Ren F,
Wang D,
Drmanac R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    905;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1185pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xue
Ma y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO:905.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , Zhao
Asundi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۷<u>۵</u>,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wang J,
Wang Z,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wehrman Weng G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          atelet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
DB:
                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                Ś
                                                                                                                                  日
                                                                                                                                                              ঠ
                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                 명
                                                                                                                                                                                                                                                                                                                                                                                  뭐
                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                 837
                                                                                                                                                                                                                                                                                                                                                                                     657
                                                                                                                                                                                                                                                                                                                                                                                                                              141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              477
                                                                                        221
                                                                                                                                                                        201
                                                                                                                                                                                                                  777
                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                  717
                                                                                                                                                                                                                                                                                                                                             161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21
      GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS
                                                                                                                                                                                                                                                                                                                                                                                     GAGGAA
```

```
និនិនិនិនិនិនិនិនិនិ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-515-363C-2 (1-1025) x ADC30823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            c also used for treating diseases such as Parkinson's disease disease and other neurodegenerative diseases, anaemia, plat disorders, wounds, burns, ulcers, osteoporosis, autoimmune cancer. The nucleic acids may also be used as hybridisation primers, and in the recombinant production of a protein. The are also useful in generating antibodies, as molecular weige and as food supplements. The present sequence represents a colaimed human cDNA sequence of the invention. Note: The set contained in electronic form part of the printed specification, cobtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 3446 BP; 1184 A;
                GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG
                                                                                                                                                                                                                                                            GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaG
                                                                                                                                                                                                                                                                                                                     LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuA
                                                                                                                                                                                                                                                                                                                                                                 GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnM
                                                                                                                                   PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS
                                                          GATTGCTCAGAAAGCAATGCAGAGATTGAGAATTTATCACAAGTTG
                                                                        AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValA
                                                                                                                                                                                                 GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGTGAAGGAGCAGATTCAGAGGACAGTCGCCACCTCCGGGAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGGGTGAAAATGTACATCCAGGTGGAGCCTGTGCTGGACTACCTGA
                                                                                                                                                                               GAATCAGGT
                                                                                                                                                                                                                                           IGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                             TCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGA
                                                                                                                                                                               GTAAGAGAGCTACTAAAAAGGATTGTGCAGAAAGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
5285.(
99.7%
99.5%
99.5%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-3446)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ,.
H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3446
1020
2
3
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in. The polypeptides weight markers, nts a specifically he sequence data for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ease, Alzheimer's
platelet
                                                                                                                                                                                                                                                                                                                           spLysCysMetGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 etGlnAlaValGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ion, but was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tion probes or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            une diseases or
                                                                                                                                       luLeuThrGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nrArgGluPheVal
                           uValTrpGlyMet
                                                                                                                                                                                                                                                                                                        TAAGTGCATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CETECTTCAGGGCC
                                                           TGGTCCTCAAGTG
                                                                                                                     GTTAACAGGCTCT
                                                                                                                                                                                                                                            AAACAATGGAAAT
                                                                                                                                                                                                                                                                     uAsnAsnGlyAsn
                                                                                                                                                                                                                                                                                                                                                                                               nLeuLeuAsnLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGGCAGTTGAA
                                                                                                                                                                                CTGGTTCTCTGCA
                                                                                                                                                                                                   nTrpPheSerAla
                                                                              pGlyProGlnVal
                                                                                                                                                                                                                                                                                                                                                                                                                               CCCTGAGCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTTCTGCCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 rPheLeuProAla
|||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rCysPheArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                             nProGluLeuThr
                            240
                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
956
                                                           896
                                                                                       220
                                                                                                                    836
                                                                                                                                                   200
                                                                                                                                                                               776
                                                                                                                                                                                                                                           716
                                                                                                                                                                                                                                                                        160
                                                                                                                                                                                                                                                                                                                                    140
                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                        656
                                                                                                                                                                                                                                                                                                                                                                    596
                                                                                                                                                                                                                                                                                                                                                                                                                               536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
```

erGluSerAspThr 260

ş	용 성	g Qy	d Qy	D Q	B &	8 8	8 8	ρ γ	P &	D QY	B &	φ φ	Qy db	B 8	p Q	g 49	д Q	Db
AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle 6	TrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsnArgLysGluArgVal	IleGlnThrTyrCy8GlnMetSerProMetSerAspPheGlyThrGlnProTyrGluGln	541 IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArg 560 	VallysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLysLysPheAla 540 	LysalaGluGluHisIleLeuLysLeuCysalaAsnLeuAspAlaPheThrIleLysThr 52 	LeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThrLy8GlnAla 50 	TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLysProValllePro 48 	IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAsnIleMetArgHis 46 	LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeuIle 44 	ProGluVal	LeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSerPhe 40 	ValleuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPhe 38	TyrileAlaLysAspHisLeuAspLysLysLysAlaSerGluProGlyLysVallle 36 	GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysThrArgValAlaVal 34	SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeu 32	GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaAlaAla 30	SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnM 	
Db dy	g dd !	O B i	S B S	D QY	D QY	9 dg V	gb . Q	}) D 4	8 B &	S B 2	₽ B \$	S B &	S B &	S B &	S B 7	§ § §	рь
~ 0			STAILLE IN FREHENCY SHY MABIICY SOELY WAT LEGIT ACT SOELY	81 IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro 90	61 ValGinAsnMetbysProGiuGiuTyrAiaHisLysIIeLeuGiuLeuGinMetGinSer o 	41 IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlalleHisCys 8	21 GIVAIGAI AAIGAI AABPGIUSEI IIII YI VAILEUVAIAI AABBGIUSEI YVAI O 	OT CYBABILITEVALITEMENT STATEMENT OF CONTROL OF CARCAMIGAAATAGCCATGG	77 GGAAAAATAAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA 2	1 SERGILERIELYBERONIC INTERNATIONAL AND	57 AATGAAAAATTTGCTGAAGTAGGAGTCAAAGCCCACCATCTGATTGGAGCTGGACACAGC 25						21 ASPALATYTTITTASHEUGIUTITTASHGIUGIUTYSASPUYSENSPUYSENSPUYSENSATAA 93 93 94 95 95 96 97 97 97 97 97 97 97	37 GCAGAACATTTGAGGAAGTACAATAAGGCCCTACAAATTAATGACACAATTCGAATGATA 2

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                  Best I
Query
DB:
                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                       밁
        ঠ
                                                      US-09-515-363C-2 (1-1025) x ADN04879
                                                                                                                                                                                                Claim
                                                                                                                                                                                                               New PRO nucleic acid or polypeptide, useful for preparing a pharmaceutical composition for diagnosing or treating psoriasis mammal.
                                                                                                                                                                                                                                               WPI; 200
P-PSDB;
                                                                                                                                                                                                                                                                      Bodary
Wu TD;
                                                                                                                                                  The invention relates to novel polynucleotide and polypeptides for treating psoriasis or a sequence having at least 80% identity to the above sequences. The nucleic acid is useful for preparing a composition for diagnosing or treating psoriasis in a mammal. This sequence corresponds to one of the polynucleotides of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                       Antipsoriatic
                                                                                                                                                                                                                                                                                                                                                                                                                                       ADN0487
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADN04879
                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                            25-SEP-2002;
                                                                                                                                                                                                                                                                                                                            25-SEP-2003;
                                                                                                                                                                                                                                                                                                                                           08-APR-2004
                                                                                                                                                                                                                                                                                                                                                           WO2004028479-A2
                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUL-2004
                                                                                                                                                                                                                                                                                             (GETH )
                                                                                                                                                                                                                                                                                                                                                                                         gene; antipsoriatic;
                                                                                                                                                                                                                                              2004-305105/28
)B; ADN04880.
         21
                                                                                                                                                                                                                                                                             ,
ა
                                                                                                                                                                                                                                                                                             GENENTECH
                                                                                                                                                                                                SEQ
ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
                                                                                                                                                                                                                                                                             Clark H,
                                                                                                                                                                                                ID NO 1273;
                                                                                                                                                                                                                                                                                                            2002US-0414006P
                                                                                                                                                                                                                                                                                                                            2003WO-US030907.
                                                                                                                                                                                                                                                                                                                                                                                                        CDNA
                                                                                                                                    BP; 1152
                                                                      0
5283.00
99.9%
99.9%
99.5%
                                                                                                                                                                                                                                                                                                                                                                                                       sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA;
                                                                                                                                                                                                                                                                             Jackman
                                                                                                                                   P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1025
                                                                                                                                                                                                3069pp; English.
                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                       3379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3311
                                                                                                                                    644
                                                                                                                                                                                                                                                                             'n
                                                                                                                                                                                                                                                                                                                                                                                         therapy;
                                                                                                                                    Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                       (1-3379)
                                                                                                                                    753
                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                             Schoenfeld
                                                                                                                                    <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                                                         psoriasis; diagnosis
                                                                                                                                    830
                                                                                                                                    Ţ,
                                                                                                                                                                                                                                                                             Ç
                                                                                                                                    0
                                                                                                                                                                                                                                                                             Williams
                                                                       3379
1024
0
1
                                                                                                                                   Ų;
                                                                                                                                    0
                                                                                                                                   Other;
                                                                                                                                                                                                                                                                             PM,
                                                                                                                                                                                                                                                                              Wood
                                                                                                                                                                                                                        Ħ
                                                                                                                                                                                                                                                                              WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3236
                         228
                                         20
           40
            5
                               멍
                                            5
                                                               뮹
                                                                        8
                                                                                            В
                                                                                                       장 유
                                                                                                                                      5
                                                                                                                                                          음 성 음
                                                                                                                                                                                                    δ
                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                  몽
                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                              음 중
                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                 음 성 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          뭐
                                                                                                                                                           1009
                                                               1189
                                                                                               1129
                                                                                                                            1069
                                 1249
                                                                              341
                                                                                                                                          301
                                                                                                                                                                                                       261
                                                                                                            321
                                                                                                                                                                          281
                                                                                                                                                                                         949
                                                                                                                                                                                                                        889
                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                      829
                                                                                                                                                                                                                                                                                                                     709
                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                    649
                                                                                                                                                                                                                                                                      221
                                                                                                                                                                                                                                                                                      769
                                                                                                                                                                                                                                                                                                    201
                                                                                                                                                                                                                                                                                                                                                                                                 141
                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                              469
                                                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                        GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG.
                                                                                                                                                                                                                                                                                    ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysG
                                                                                              GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysTl
                                                                                                                                                                                                                                                                                                                                                   SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAi
                                                                                                                                                           GGCAGTGATTCAGGCACCATGGGAAGTGATTCAGATGAAGAGAATG
                                                                                                                                                                    GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnVa
                                                                                                                                                                                                                        GAGAATAACTCATCAGAATCATCTTTTGCAGATTCTTCTGTAGTTT
                                                                                                                                                                                                                                 GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValSu
                                                                                                                                                                                                                                                                                                                     PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGl
                                                                                                                                                                                                                                                                                                                                                                                                                CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGG
                                                                                                                                                                                                                                                                                                                                                                                                                         LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpTi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGGTGAAAATGTACATCCAGGTGGAGCCTGTGCTGGACTACCTGA
            LeuLysLysTrpTyrArqVallleGlyLeuSerGlyAspThrGlnLe
                                                                        GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGA
                                                                                                                            TCCCCGGAGCCAGAACTCCAGCCCAGGCCTTACCAAATGGAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          etGlnAlaValGlu 60
|||||||||||
|TGCAGGCAGTTGAA 348
   euLysIleSerPhe 400
|||||||||||
|GAAAATATCATTT 1368
                                                                                              hrArgValAlaVal 340
|||||||||||||
|CCAGAGTGGCTGTT 1188
                                                                                                                                                                    alAlaAlaArgAla 300
||||||||||
                                                                                                                                                                                                                                                                                                                     AGTTAACAGGCTCT
                                                                                                                                                                                                                                                                                                                            luLeuThrGlySer 200
                                                                                                                                                                                                                                                                                                                                                                                  luAsnAsnGlyAsn 160
|||||||||||
AAAACAATGGAAAT 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTTTCTGCCTGCA 288
                                                                                                                                                                                                                                                                                     SPG1YProG1nVal 220
                                                                                                                                                                                                                                                                                                                                                                                                                                              InLeuLeuAsnLeu 120
                                 luPheGlnProPhe 380
                                                                          roGlyLysVallle 360
                                                                                                                                     laGlnProAlaLeu 320
                                                                                                                                                                                         isAsnSerAsnMet 280
|||||||||||
|TAACAGCAACATG 1008
                                                                                                                                                           GGCAGCAAGAGCA 1068
                                                                                                                                                                                                                        erGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                              nTrpPheSerAla 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCCTGAGCTCACG 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nProGluLeuThr 100
                                                                 TGGAAAAGTTATA 1248
                                                                                                                                                                                                                                                        GGTCTGGGGCATG
                                                                                                                                                                                                                                                                 .uValTrpGlyMet
                                                                                                                                                                                                                                                                                                                                                  CTGGTTCTCTGCA 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rArgGluPheVal 80
                                                                                                                             CCAGCCAGCCTTG
                                                                                                                             1128
                                                                                                                                                                                                                                                       888
                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                     768
                                                                                                                                                                                                                                                                                                                                                                                                                 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             408
```

청 음 정

뮍

```
1788
                                                                                                                                                                                                                                                                                                            1728
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1429
                                                                                                                                                                                                                         1908
                                                                                                                                                                                                                                                    1848
                                                                                                                                                                                                                                                                                                                                                                      1608
                                                                                                                                                                                                                                                                                                                                                                                                                              1489
                                                                                                                                                                                                                                                                                                                                         1668
                                                                                                                                                                                                                                                                                                                                                                                                  1548
                                               2268
                                                                           2208
                                                                                                       2148
                                                                                                                                    2088
                                                                                                                                                                2028
                                                                                                                                                                                                                                    581
                                                                                                                                                                                                                                                                561
                                                                                                                                                                                                                                                                                             541
                                                           701
                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                461
                                                                                                                                                                                                                                                                                                                                                                                                                                           441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeuIle
                                                                                                                                                                                                                                                                                                            GlyIleIlePheThrLysThrArgGlnSerAlaTyrAlaLeuSerGl
                                              LeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArg
                                                                                                       AspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhe
                                                                                                                                                               AspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAlaVal
                                                                                                                                                                                            AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
                                                                                                                                                                                                                         IleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArg
                                                                                                                                                                                                                                                                                                                                                 LysAlaGluGluHisIl
                                                                                                                                                                                                                                                                                                                                                                              LeuProGlnI1eLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThrLy8GlnAl
                                                                                                                                                                                                                                                                                                                                                                                                                              PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys
                                                                                                                                                                                                                                                                                                                                                                      AsnGluLysPheAlaGluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHisSer
                                                                                                                                    lnTrpIleThrGlu
||||||||||
|CagTGGATTACTGAA
                                                                                                                                                                                                                                                     1907
                                                                                                                                                                                                                                                                                               560
                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                        520
                                                                                                                                                                                                                                                                                                                                                                                                                                             460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         440
                                                                                          700
                                                                                                                       089
                                                                                                                                                   660
                                                                                                                                                                               640
                                                                                                                                                                                             2027
                                                                                                                                                                                                           620
                                                                                                                                                                                                                         1967
                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                   580
                                                                                                                                                                                                                                                                                 1847
                                                                                                                                                                                                                                                                                                                                                                       1667
                                                                                                                                                                                                                                                                                                                                                                                    500
                                                                                                                                                                                                                                                                                                                                                                                                   1607
                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                1547
                   2387
                                 740
                                               2327
                                                             720
                                                                            2267
                                                                                                         2207
                                                                                                                                                                 2087
```

ঠ 🔓 ঠ

```
2448
                                                                                                                                                                                                                                                                                               3048
                                                                                                                                                                                                                                                                                                                                                                                                     2988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2868
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                            981
                                                                                                                                                                                                                                                                                                                                                  961
                                                                                                                                                                                                                                                                                                                                                                                                                                                    941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  921
PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GlyLy8IleA8nLeuLeuIleAlaThrThrValAlaGluGluGlyLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThr
                                                                                                                                                                                                                                                                                                                                                                                               HisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                               CysLeuLysIleArgAsnPheValValPalPheLysAsnAsnSerT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSelleuIleuAlaCysSelleuIleuAlaCysSerValLeuAlaCysSerValLeuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSerLeuIleuAlaCysSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IlecysLyscysGlyGlnAl
 3242
                                                                                                                                                                                                                                                                                                 laTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                        erGluCysCysLeu 1020
                                                                                                                                                                                                                                      hrLysLysGlnTyr 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              erGlyGluAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          erGlySerGlyVal 840
                                                                                                                                                                                                       CAAAGAAACAATAC
                                                                                                                                                                                                                                                                                                                                                                                                         TAAATGGTGAAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGGGAAGATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGGTTCAGGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGATATTAAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                      .eAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rLysAsnAsnPro 900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTATACATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sAlaIleHisCys 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 uAspIleLysGlu
||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               uGlnMetGlnSer 880
                                                                                                       3227
                                                                                                                                                                                                                                                                                                                                                        980
                                                                                                                                                                                                                                                                                                                                                                                                                                                      960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2507
                                                                                                                                                                                                     3167
                                                                                                                                                                                                                                                                                                                                                                                                         3047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    780
                                                                                                                                                                                                                                                                                                       3107
```

멍

8 8 8 8 8 8

AAD11170 standard; DNA; 3131

29-NOV-2001 (first entry)

Human melanoma differentiation associated-5 protein-rel ated DNA.

RESULT 12
AAD11170
ID AAD11
XX
AC AAD11
XX
DT 29-NC
XX
DE Human
XX
Human
XW
Human
XW
RNA h
KW
RNA h
KW
neurc
KW
Dreas
KW
Centr
XX
XX
OS Homo Human melanoma differentiation associated gene; Mda-5; RNA helicase motif; caspase recruitment domain; CARD; t neuroblastoma; astrocytoma; glioblastoma; multiforme; c breast; colon; prostate; osteosarcoma; chrondosarcoma; central nervous system; cytostatic; apoptosis; ds. 5; interferon; IFN;
; therapy; melanoma;
; cancer; cervical;
a; systemic toxicity;

유

```
cc melanoma differentiation associated gene-5 (Mda-5) polypeptide. Mda-5 (CC contains a caspase recruitment domain (CARD) and a RNA helicase motif. CC Mda-5 is a novel interferon (IFN) inducible gene with structural cc similarities to RNA helicases and CARD motif containing proteins. Mda-5 (is induced during terminal differentiation in human melanoma cells treated with the combination of recombinant fibroblast IFN and the compounds that may induce its expression. Mda-5 is useful for identifying cancer e.g., melanoma, neuroblastoma, astrocytoma, glioblastoma cc cancer e.g., melanoma, neuroblastoma, astrocytoma, glioblastoma cc cancer, osteosarcoma, chrondosarcoma and especially where the cancer is a cancer of the central nervous system and especially where the cancer cancer of the central nervous system and apoptosis. The Mda-5 promoter exhibits melanocyte tissue specificity and minimises systemic toxicity. The present sequence is designated SEQ ID NO:2 in the main cody of the specification (AAEI0155). The present sequence listing, but compared to in the sequence designated SEQ ID NO:2 in the main compared to in the sequence listing, but compared to in the sequence listing.
                                                                                                                                                                                                                                                                                                                                                     Query
DB:
                                                              ঠ
                                                                                        멍
                                                                                                         8
                                                                                                                                      밁
                                                                                                                                                            Ś
                                                                                                                                                                                    밁
                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
              8
                                           멍
                                                                                                                                                                                                                                 US-09-515-363C-2 (1-1025) x AAD11170
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleic acid
Gene useful i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    07-SEP-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200164707-A1
                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-FEB-2001;
                                                                                                                                                                                                                                                                                                                   No . :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OYCO
                                             181
                                                                                         121
                                                                                                               41
                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VIND
                                                                                                                                                                                                                                                                                                                                                     3131
                                                                                                     GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                                                                                                                                       ArgValLysMetTyrIieGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
            GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr
                                            ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCC
                                                                                                                                                                                               MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCGCCCGCTACATGAACCCTGAGCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 134-148; 152pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COLUMBIA NEW YORK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2000US-00515363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001WO-US006960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
                                                                                                                                                                                                                                                                                                                                                      1075
                                                                                                                                                                                                                                                        0
5276.5
99.7%
99.7%
99.4%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gopalkrishnan
                                                                                                                                                                                                                                                                                                                                                    ?
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             encoding a N
                                                                                                                                                                                                                                                                                                      . 50
                                                                                                                                                                                                                                                                                                                                                    583
                                                                                                                                                                                                                                                                                                                                                     Ç
                                                                                                                                                                                                                                 (1-3131)
                                                                                                                                                                                                                                                                                                                                                      699
                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Melanoma Differentiation Associated h suppression, apoptosis and anti-viral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RV;
                                                                                                                                                                                                                                                                                                                                                     <u>ი</u>
                                                                                                                                                                                                                                                                                                                                                    774
                                                                                                                                                                                                                                                                                                                                                     ij
                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                         3131
1024
0
0
3
1
                                                                                                                                                                                                                                                                                                                                                     무
                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                      Other;
                                                                                                                                       120
                     100
                                            240
                                                                                         180
                                                                                                               60
                                                                  90
                                                                                                                                                            40
                                                                                                                                                                                    60
                                                                                                                                                                                                          20
                        ঠ
                                                     멼
                                                                      δ
                                                                                           멍
                                                                                                                   5
                                                                                                                                                 멍
                                                                                                                                                               ্ধ
                                                                                                                                                                                             밁
                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                             र्
                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                               1081
                                                                                                                                                                                                                                             1021
                                                                                                    1201
                                                                                                                                                  1141
                                                                                                                          401
                                                                                                                                                                        381
                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                  321
                                                                                                                                                                                                                                                                                                                                         901
                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                        841
                                                                                                                                                                                                                                                                                                                                                                                                                                       781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                              281
                                                                                                                                                                                                                                                                                                                                                                                                                                                            261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                       LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAs
                                                                                                                                                 LeuLysLysTrpTyrArgValIleGlyLeuSerGlyAspThrGlnL
                                                                                                                                                                                                           ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysG
                                                                                                                                                                                                                                                                                         GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaGluAsnAsnGlyAsn 160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGlyMet 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCT 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GluSerGlyValArgGluLeuLeuLy8ArgIleValGlnLy8GluA8nTrpPheSerAla 180
                          | IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnA
                                                                                                     CCAGAAGTTGTCAAGTCCTGTGAT---ATTATCAGTACAGCTCAAA
                                                                                                                ProGluValValLysSerCysAspIleIleIleSerThrAlaGlnI
                                                                                                                                                                                                                                             TACATTGCCAAGGATCACTTAGACAAGAAGAAAAAAGCATCTGAGC
                                                                                                                                                                                                                                                            TyrIleAlaLysAspHisLeuAspLysLysLysLysAysAlaSerGluP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAGAGCAACTTCTTTCAACCACAGTTCAGCCAAATCTGGAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACTIGCCCTCTCCATCGTTTGAGAACGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       snIleMetArgHis 460
                                                                                                                                                 euLysIleSerPhe 400
|||||||||||||
TGAAAATATCATTT 1200
                                                                                                                                                                                                             luPheGlnProPhe 380
                                                                                                                                                                                                                                            TOGIYLYSVALILE 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                   isAsnSerAsnMet 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   erGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATAAGTGCATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    spLysCysMetGlu 140
                                                                                                                                                                                                                                                                                                                                                                                                                                       ATAACAGCAACATG 840
                                                                                                   leLeuGluAsnSer 420
|||||||||||||
|CCTTGAAAACTCC 1257
           CATCATGAGGCAT 1377
                                                                                                                                                                                               GTTCCAACCATTT 1140
                                                      pPheSerLeuIle 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTCTGGGGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          uLeuThrGlySer 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 720
```

```
1798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1438
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1558
                              2398
                                                                                         2338
                                                                                                                                                   2278
                                                                                                                                                                                                             2218
                                                                                                                                                                                                                                                                         2158
                                                                                                                                                                                                                                                                                                                                    2098
                                                                                                                                                                                                                                                                                                                                                                                              2038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           621
                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           561
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   461
                                                                                                                    780
                                                                                                                                                                                 760
                                                                                                                                                                                                                                           740
                                                                                                                                                                                                                                                                                                                                                                700
                                                                                                                                                                                                                                                                                                                                                                                                                           680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsnArgLysGluArgValCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAA
{\tt rgGlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlySerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyValAlaHisSerGlyVa
                                                  luCysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGGCCATTCAAATGGAAAAAAAGCTGCAAAAAAAGGAAATCGCAAAGAACGTGTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         500
                                                                                                                                                                                                                                            760
                                                                                                                                                                                                                                                                                                      740
                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                               2097
                                                                                                                                                                                                                                                                                                                                                                                                                             700
                                                                                                                                                                                                                                                                                                                                                                                                                                                           2037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1437
                                                                                                                      800
                                                                                                                                                      2337
                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                           2217
                                                                                                                                                                                                                                                                                                                                       2157
 RESULT 13
ADQ22237
XX
ADQ22
XX
AC
ADQ22
XX
BOft
KW Boft
KW GB.
XX
Homo
XX
WO200
XX
PD 10-JU
XX
PD 10-JU
XX
PF 26-NC
XX
PF 26-NC
XX
PF 26-NC
XX
AC
PR 4PI;
XX
DR WPI;
XX
DR WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         청 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유 원
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뮹
```

음 성 음 성

음 성 음

중 음 중

유 성

음 중

8 8 음 성

음 성

음 성

Ś

유

B & B

음용

중 음 중

뮍

& & &

```
ADQ22237 standard;
                 WPI; 2004-441208/41
                                                                     26-NOV-2002;
                                                                                       26-NOV-2003; 2003WO-US038193
                                                                                                          10-JUN-2004.
                                                                                                                            WO2004048938-A2
                                                                                                                                                                                                                               ADQ22237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2578
                                                                                                                                                                                                                                                                                                                                                             2938
                                                                                                                                                                                                                                                                                                                                                                                                2878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2518
                                                                                                                                                                                                                                                                                                      1020
                                                                                                                                                                                                                                                                                                                                          1000
                                                                                                                                                                                                                                                                                                                                                                                                                                   2818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    960
                                                                                                                                                                                                                                                                                                                                                                             980
                                                                                                                                                                                                                                                                                                                                                                                                                 960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        920
                                                                                                                                             sapiens
                                                     PROTEIN DESIGN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  roSerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       leHisValIleGluLysMetHisHisValAsnMetThrProGluPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               erIleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHis
                                Ginsburg WM,
                                                                                                                                                                                                                                                                                                                                                                                                       leIleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLys
                                                                                                                                                                                                                                                                                                 euPheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                         YrLysLysTrpValGluLeuProIleThrPheProAsnLeuAspTy:
                                                                                                                                                                                                                                                                                                                                                            roCysLeuLysIleArgAsnPheValValValPheLysAsnAsnSe:
                                                                                                                                                                         sarcoma;
                                                                     2002US-0429739P
Offi
                                                                                                                                                                                         sarcoma-upregulated
                                                                                                                                                                                                                                                 DNA;
BOft
                                                                                                                                                                                                            entry)
                                                                                                                                                                         cytostatic;
                                                     LABS
tissue
                                                                                                                                                                                                                                                                                                       1025
                                                                                                                                                                                                                                                 48
sarcoma
                                                                                                                                                                         gene
                                                                                                                                                                                            DNA - SEQ ID
                                                                                                                                                                         therapy;
comprises
                                                                                                                                                                         vaccine
ining expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   uLeuGlnMetGlnS 880
||||||||||
ATTACAGATGCAAA 2637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAAAGCTATACATT 2577
                                                                                                                                                                                                                                                                                                                                                                                                                                  SerGluCysCysL 1020
                                                                                                                                                                                                                                                                                                                                                                                                GGCTTAGATTTGC 2937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      screening; human;
                                                                                                                                                                                                                                                                                                                           TCAGAATGCTGTT 3057
                                                                                                                                                                                                                                                                                                                                                                          ThrLysLysGlnT 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LysGluLeuTyrI 940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTGGGGAAGATA 2757
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TÁCAAGAATAACC 2697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LysAlaIleHisC 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |||||||||||||
|AGTGGTTCAGGAG 2517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TyrLysAsnAsnP 900
                                                                                                                                                                                                                                                                                                                                                              ACAAAGAAACAAT 2997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGGAACTTTACA 2817
```

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                            멍
                                                                                                                                                            ঠ
                                                                                                                                                                                    9
                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                     뫄
                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                      ঠ
                                                                          5
                                                                                                    명
                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-515-363C-2 (1-1025) x ADQ22237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel method for detecting soft tissue sarcoma which comprises obtaining a first soft tissue sample from an individual and a normal soft tissue sample from the same or different individual, determining the expression of a gene in both samples and comparing the expression of the gene in both soft tissue samples and comparing the presence of soft tissue sarcoma. The method of the invention has cytostatic applications and may be useful for detecting soft tissue sarcoma, possibly via gene therapy or vaccine production. The nucleic acid sequences may be useful in diagnostic and screening applications. The current sequence is that of a human soft tissue sarcoma-upregulated DNA of the invention. The current sequence is not shown within the specification per se but was submitted in CD format by the inventor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of a gene in a first and comparing the ger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sarcoma
                                                                                                                        141
                                                                                                                                            529
                     709
                                        181
                                                                                161
                                                                                                     589
                                                                                                                                                                121
                                                                                                                                                                                     469
                                                                                                                                                                                                         101
                                                                                                                                                                                                                              409
                                                                                                                                                                                                                                                                                                               289
                                                                                                                                                                                                                                                                                                                                                       229
                                                                                                                                                                                                                                                                                                                                                                                              169
                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                 81
                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                          21
                                                                                                                                                                                                                                                                                                                            GluVal:
                                                                                                     GACT
                                                                                                                                                                                                                                      GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAgnProGluLeuThr
                                                                                                                                                                                                                                                                               LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3668
                                                                          GluSerGlyVal
                                                                                                                                                                                                 AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGlnLeuLeuAsnLeu
                                                                                                                                                                                                                                                                                                               ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                                                                                                                                                                                                                                                                                                                                                              ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                          MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
                               PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySer
                                                                                                                                                                                                                              GAGGCC
                                                                                                                                                                                                                                                                                                                                                       TTTCTGAATGNNNNNNNNNNNNNNNNNNNNNNNTGAACTTGTCCAAGAGTTAACAGGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           вP;
                                                                                                                                                                                                                                                                                                                        LysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        st soft tissue sample and a normal soft tissue sample gene expression, also useful in treating soft tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
5251.00
99.1%
99.0%
98.9%
                                                                          | ArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            210pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; 811 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-3668)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ţ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3668
1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Other;
                                                                               180
                                        200
                                                                                                                                                                                                                                                 100
                                                              708
                                                                                                     648
                                                                                                                         160
                                                                                                                                             588
                                                                                                                                                                140
                                                                                                                                                                                     528
                                                                                                                                                                                                         120
                                                                                                                                                                                                                              468
                                                                                                                                                                                                                                                                      408
                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                               348
                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                       288
                                                                                                                                                                                                                                                                                                                                                                                              228
                     768
                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                   20
                             B
                                               S
                                                                      뫄
                                                                                   5
                                                                                                             밁
                                                                                                                                δ
                                                                                                                                                                     ঠ
                                                                                                                                                                                              멍
                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                 日
                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                               뫄
                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         중 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                       1369
                               1789
                                                                                                               1669
                                                                                                                                                       1609
                                                                                                                                                                                                                                                                                1429
                                                                                                                                                                                                                                                                                                                                                                                                                                                1189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1069
                                                                                                                                                                                               1549
                                                                                                                                                                                                                                        1489
                                                                                                                                                                                                                                                                                                                                                                1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1009
                                                                                                                                                                                                                                                                                                                                                                                                         1249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
            561
                                                                                            521
                                                                                                                                                                           481
                                                                                                                                                                                                                  461
                                                                                                                                                                                                                                                           441
                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                             401
                                                                                                                                                                                                                                                                                                                                                                                    381
                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          769
IleGlnThrTyrCy8GlnMetSerProMetSerAspPheGlyThrG
                                                                                                                                                                                                                                                                                                                        GluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysTl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValSi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTTAAAAGAAAACCTTGATCAACTGAAAAAACCAAATACAGGAGCCAT
                                                                                    ValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProC
                                                                                                               LeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyA
                                                                                                                                                                                                                                                                                                                                                                LeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeullysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeullysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeullysLysTrpAsgAaAaTGGTATCGTGTTATTGGATTAAGTGGTGATACCCAAC
                                                                                                                                                                                                                                                                                                                                                                                                          GTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                    SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAGAGCAACTTCTTTCAACCACAGTTCAGCCAAATCTGGAGAAGG
                                                                                                                                                                                                         TyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnL
                                                                                                                                                                                                                                                   IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAv
                                                                                                                                                                                                                                                                                CTCTTAAACTTGGAAAATGGAGAAGATGCTGGTGT
                                                                                                                                                                                                                                                                                           LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTTTGGCAGAAGGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGAC
                                             eAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuG
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGACAAGAAGAAAAAGCATCTGAGC
                                AAAGAGAAACTTCTAG
                                                                                                                                                                                                                                                                                TCAATTGTCAG
                                                                                                                                                                                                 GAAAGAAAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hrArgValAlaVal 340
                                                                                                                                                                                                                                                   snIleMetArgHis 460
                                                                                                                                                                                                                                                                                                                                    leLeuGluAsnSer 420
                                                                                                                                                                                                                                                                                                                                                                euLysIleSerPhe 400
|||||||||||
TGAAAATATCATTT 1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                roGlyLysVallle 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           erGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTACTATTAAAACT 1728
                                                                                                                              neThrIleLysThr
                                                                                                                                                                    laThrLysGlnAla 500
                                                                                                                                                                                                                                                                                                                                                                                                         AGTTCCAACCATTT 1308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11A1aA1aArgAla 300
 |||ProTyrGluGln 580
                                AATAATGACAAGG
                                           ulleMetThrArg 560
                                                                                   'sLysLysPheAla 540
|||||||||||
                                                                                                                                                                                                                                                                                SpPheSerLeuIle 440
                                                                                                                                                                                                                                                                                                                        CCTTGAAAACTCC 1428
                                                                                                                                                                                                                                                                                                                                                                                                                    TGGAAAAGTTATA 1248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |aGlnProAlaLeu 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               luValTrpGlyMet 240
                                                                                                                                                       CACGAAGCAAGCC
                                                                                                                                                                                                             'sProValllePro 480
                                                                                                                                                                                                                                         CATCATGAGGCAT 1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTCTGGGGCATG
                                                                         CAAGAAGTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGCCAGCCTTG 1128
                                1848
                                                                         1788
                                                                                                                                    520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    888
                                                                                                                                                        1668
                                                                                                                                                                                                 1608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            828
```

S

Ś

201

AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal

```
1969
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1909
                                                                                                                                                                                                                                                                                                                                                                                                                       2329
                                                                       2809
                                                                                                                                                            2689
                                                                                                                                                                                                     2629
                                                                                                                                                                                                                                               2569
                                                                                                                                                                                                                                                                                         2509
                                                                                                                                                                                                                                                                                                                                   2449
                                                                                                                                                                                                                                                                                                                                                                             2389
                                                                                                                                                                                                                                                                                                                                                        761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                  901
                                                                                                                                                                                                                                                                                                               781
                                                                                                                                                                                                                                                                                                                                                                                                 741
                                                                                                                                                                                                                                                                                                                                                                                                                                           721
        921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThr
                                                                                                                                                                                                                                                                                                                                                                                                                        IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro
                                                                                                                 CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAlaVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAGAACATTTGAGGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCGAATGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTGGAACTCAACCCTATGAACAA
                                     SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle
                                                                                                                                                           |||||||ATCGAACGTGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGT
                                                                                                                                                                        IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                                                                                                                                                                                                                                                               AATGAAAATTTGCTGAAGTAGGAGTCAAAGCCCCACCATCTGATTGGAGCTGGACACAGC
                                                                                                                                                                                                                                                                                                                                                                                           AsnGluLysPheAlaGluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHisSer
18ValIl
|||||||
.eGluLysMetHisHisValAsnMetThrProGluPheLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rtgaaaaggctggctgaaaacccagaatatgaaaatgaaaag
GGGGAAGATATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1968
        940
                                                                                                                                      980
                                                                                                                                                                                  860
                                                                                                                                                                                                                            840
                                                                                                                                                                                                                                                                                                               800
                                                                                                                                                                                                                                                                                                                                     2508
                                                                                                                                                                                                                                                                                                                                                         780
                                                                                                                                                                                                                                                                                                                                                                               2448
                                                                                                                                                                                                                                                                                                                                                                                                   760
                                                                                                                                                                                                                                                                                                                                                                                                                        2388
                                                                                                                                                                                                                                                                                                                                                                                                                                             740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2088
                                                                                                                   2808
                                                                                                                                                                                                       2688
                                                                                                                                                                                                                                                 2628
                                                                                                                                                                                                                                                                                           2568
```

```
5 5 5 5 5
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                           음 성
                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                               04-AUG-2003;
                                                                                                                                                                                                            bronchial asthma; chronic obstructive pulmonary disease respiratory epithelial cell; interleukin-13; respirator
                                                                                                                                                                                                                            Marker
                                                                                                                           Ohtani
                                                                                                                                                06-AUG-2002;
20-MAR-2003;
                                                                                                                                                                         03-MAR-2004.
                                                                                                                                                                                                                                      20-MAY-2004
                                                                                                                                                                                                                                                 ADJ75813;
                                                                                                                                                                                                                                                           ADJ75813
                                                                                                                                     (GENO-) GENOX RES
                                                                                                                                                                                                                                                                                                                        3109
                                                                                                                                                                                                                                                                                                                                             3049
                                                                                                                                                                                              musculus
                                                                                                                                                                                                                                                                                         1021
                                                                                                                                                                                                                                                                                                                                                                 2989
                                                                                                                                                                                                                                                                                                                                  981
                                                                                                                                                                                                                                                                                                                                                                           941
                                                                                                                 2004-193155/19.
                                                                                                                                                                                                                            gene
                                                                                                                           ,
                                                                                                                                                                                                                                                                                                                                                                CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerTi
                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                TTTAGTGATGAGGAT
                                                                                                                                                                                                                                                                                     PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                             тяктакт
                                                                                                                                                                                                                                                                                                                                             ATCTGCA
                                                                                                                                                                                                                                                                                                                                                  IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysG.
                                                                                                                           Sugita
                                                                                                                                                                                                                            SEQ
                                                                                                                                                2002JP-00229312.
2003JP-00077212.
                                                                                                                                                               2003EP-00254857.
                                                                                                                                                                                                                                      (fi
                                                                                                                                                                                                        marker
                                                                                                                                                                                                                            IJ
                                                                                                                                                                                                                                      ret
                                                                                                                                                                                                                                                                                                          rpValGluLeuProIleThrPheProAsnLeuAspTyrS
                                                                                                                         Υ,
                                                                                                                                      INC.
                                                                                                                                                                                                                                                           DNA;
                                                                                                                                                                                                                            NO:1065
                                                                                                                                                                                                        gene; gene;
                                                                                                                            Yamaya
                                                                                                                                                                                                                                                           3771
                                                                                                                                                                                                                                                                                         1025
                                                                                                                           ζ
                                                                                                                                                                                                                                                           ₽P
                                                                                                                            Kubo
                                                                                                                            Ή
                                                                                                                           Nagai
                                                                                                                            Ħ,
                                                                                                                                                                                                             y; antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                  TAAATGGTGAAATC
                                                                                                                             hara
                                                                                                                                                                                                                                                                                                                                                                        eAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                 rLysLysGlnTyr
                                                                                                                                                                                                                                                                                                                                                     yLeuAspLeuPro
                                                                                                                                                                                                                                                                                                     AGAATGCTGTTTA 3228
                                                                                                                                                                                                                                                                                                            rGluCysCysLeu
                                                                                                                                                                                                                                                                                                                         AAAGAAACAATAC
                                                                                                                             ㅈ
                                                                                                                                                                                                                                                                                                               1020
                                                                                                                                                                                                                                                                                                                                    1000
                                                                                                                                                                                                                                                                                                                                                        980
                                                                                                                                                                                                                                                                                                                         3168
                                                                                                                                                                                                                                                                                                                                              3108
                                                                                                                                                                                                                                                                                                                                                                  3048
                                                                                                                                                                                                                                                                                                                                                                            960
```

Testing for bronchial asthma or comparing the expression level of from a subject with the expression healthy subject. expression r chronic obstructive pof a marker gene in a sion level of the gene ni e monary disease by ological sample a sample from a

유상용

밁 5

ঠ

밁 र् 멍 ફ 뮍 5 ঠ

망 ঠ 밁 á

음 중

밁 ঠ 8 δ 멍

경 유

ঠ

Д ঠ 밁 ঠ 8 S 밁 र्

Claim 14; SEQ ID NO 1065; 241pp; English

The present invention describes a method of testing for bronchial asthma or chronic obstructive pulmonary disease. The method comprises determining the expression level of a marker gene in a biological sample from a subject, comparing the expression level determined with the expression level of the marker gene in a biological sample from a healthy subject, and judging whether the subject has bronchial asthma or chronic obstructive pulmonary disease. The marker gene comprises: (a) a group of genes (S1) whose expression levels increase when respiratory epithelial cells are stimulated with interleukin-13; or (b) a group of genes (S2) whose expression levels decrease when respiratory epithelial cells are stimulated with interleukin-13. Also described: (1) a reagent (I) for testing for bronchial asthma or chronic obstructive pulmonary disease; (2) a kit for screening for a candidate compound for a therapeutic agent to treat bronchial asthma or chronic obstructive pulmonary disease; (3)

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        an animal model for bronchial asthma or chronic obstructive pulmonary disease; (4) an inducer that induces bronchial asthma in a mouse; (5) a competitive pulmonary disease; (6) a therapeutic agent for bronchial asthma or chronic obstructive pulmonary disease, comprising the compound, compared an antisense nucleic acid corresponding to a portion of the marker gene, a ribozyme, a polynucleotide that suppresses the expression of the gene through an RNAi effect or an antibody recognising compound a protein encoded by a marker gene; and (7) a DNA chip for testing for description of a protein asthma or a chronic obstructive pulmonary disease, on which a protein asthmatic activities, and can be used in gene therapy. The method compound asthmatic activities, and can be used in gene therapy. The method componential asthma or chronic obstructive pulmonary disease. The present sequence is used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                               181
                                                                                                                                                 161
                                                                                                                                                                          655
                                                                                                                                                                                                   141
                                                                                                                                                                                                                           595
                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                   101
                                                                                                                                                                                                                                                                                                                          475
                                                                                                                                                                                                                                                                                                                                                                          415
                                                                                                                                                                                                                                                                                                                                                                                                                          355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            235
                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \vdash
                                                                                                                         GluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaGluAsnAsnGlyAsn::: ||||||||:::|||||||
                                                                                                                                                                                                                                        LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu
                                                                                                                                                                                                                                                                                        GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                          GGCTGCCCAGAAGACAACACAGACTTGGCTAACTCGTCTCACAGAGATGGGCCTGCAGCT
                                             AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal
                                                                                     PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySer
                                                                                                                                                                          AGGGACTATTGACAGTCGAAGACAGAAATCGGATTTCTGCTGCAGGAAACAGCGGGAAT
                                                                                                                                                                                                                                                                         GATCTGCCCTCTCCTCTGAGACTGCCCATGACGAGTGTCTCCACTTGCTGACCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                             GAAACCAAAGAGCAGATTCTTAAAAAGATCAACACCTGTGGTAACACCAGCGCGGCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGTCGATTGTCTGTTCTGCAGAGGACAGCTTCAGGAATCTCATCTTATTCTTCAGGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
 GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGlyMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BP; 1183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
4194.00
86.9%
79.6%
79.0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ×
                                                                         ĊŦĠĊĠĊĊĂĂĂĊŦĠĠĂĂĂŤĠAŦĠĊĄĊŤĂŦŦĊĊĂĂĠĂĂĊŤĀĂĊĂĠĠŤĠĠA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADJ75813
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-3771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      866 G;
                                                                                                                                                                                                                         TTCTGATTAACGATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3771
817
75
132
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U; 0
                                                                                                                                                                                                                            TGGACACTTGCTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Other;
                                                                                                                                                                                                   160
                                                                                                                                                                                                                                                    140
                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                                                                                                            474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             294
                          894
                                                                          834
                                                                                                                           774
                                                                                                                                                   180
                                                                                                                                                                                                                            654
                                                                                                                                                                                                                                                                           594
                                                                                                                                                                                                                                                                                                                           534
                                                                                                                                                                                                                                                                                                                                                                                                                             414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40
                                                  220
                                                                                                                                                                                                                                                                                                                                                                                                    80
                                                                                                                                                                                                                                                                                                                                                                                                                                                    9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                        Ş
                                                                                                       δ
                                                                                                                                    밁
                                                                                                                                                           Ş
                                                                                                                                                                                     밁
                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                        ঠ 함
                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                        日
                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 중 음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            몽
             ঠ
                              뭥
                                                                                      뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1195
                                                                                                                                                                                                                                                                                                                                                                                                                                         1435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1015
                                                                                                                                                                                                                                                                                                                                                                                        1495
                                                                                                                                                                                         1735
                                                                                                                                                                                                                                        1675
                                                                                                                                                                                                                                                                                        1615
                                                                                                                                                                                                                                                                                                                                         1555
                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  320
                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                460
                                                                                                                                                                                                                                                                                                                                                               440
                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             895
                                                                                                                                                                                       AlaLysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspA
:::::||||||:::||||||||
TCTGAGGCTGAAAAACATATTTTAAATATGTGCCAATCTTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ValTyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerG
|||||||||||
GTTTACATCACCAAAGATCACTTAGACAAGAAGAAGCAGCCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LeuGluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS::::::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATGAGTGTCTTCTGCCTGCTGGATGAGTCAAGTCTGGAGACAG
GlnTrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsnA
                                                                                     AlaIleAlaAspAlaThrArgGluAspProPheLysGluLysLeuL
                                                                                                                                                                                                                                                                                                     HisTyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluA
                                                                                                                                                                                                                                                                                                                                                                                      SerLeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSe
                                                                                                                                                                                                                                                                                                                                                                                                                                      PheProGluValValLysSerCysAspIleIleIleSerThrAlaGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaSerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAla 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACGACATATTACCAGAGGCTTCTTGTACAGATTCGTCTGTGACCA
                                                                                                                                                                                                                                                                                        CGATATTTGAAGCAGAAGCTGAGAAACAATGACCTCAAGAAACAAA
                                                                                                                                                                                                                                                                                                                                      AGCATTCA
                                                      ArgIleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyT
                                                                                                                                       ThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluP
                                                                                                                                                                                                                                         IleValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTATCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCAGGGATTCAGGCACCATGGGAAGTGATTCAGATGAAAGTGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGCCTTACCAAATGGAAG
  rgLysGluArgVal 599
                                                      hrGlnProTyrGlu 579
                                                                                                       euGluIleMetThr 559
                                                                                                                                         CATGCAAGAAATTT 1854
                                                                                                                                                      roCysLysLysPhe 539
                                                                                                                                                                                                          laPheThrIleLys 519
                                                                                                                                                                                                                                          CAGCCAAAAAGCAG 1734
                                                                                                                                                                                                                                                              lyAlaThrLysGln 499
                                                                                                                                                                                                                                                                                          ACAAACCAGCCATT 1674
                                                                                                                                                                                                                                                                                                        snLysProVallle 479
                                                                                                                                                                                                                                                                                                                                                      snAsnIleMetArg 459
||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                        erAspPheSerLeu 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            luProGlyLysVal 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGCCCAACCAGCT 1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCAGACAAAAAGA 1134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    al---AlaAlaArg 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          isAsnSerAsnMet 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGAATCAGACACA 1014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           erGluSerAspThr 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              || ||| :::
AGGCCTGGAACGTA 954
                                                                                                                                                                                           CCTTTACCATTAAA 1794
                                                                                                                                                                                                                                                                                                                                          ACAACATCATGAGA 1614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATCCGGGAAGGTT 1314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATAACAGCAACATG 1074
                                        CCAACATTATGAG 1974
                                                                                          AGAAATTATGGCA 1914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ĠĊŢĠĀĀĀĀTĀTĊĀ 1434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nLeuLysIleSer 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sGluPheGlnPro 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                       nIleLeuGluAsn 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sThrArgValAla 339
                                                                                                                                                                                                                                                                                                                                                                                                                                           AATCCTTGAAAAC 1494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACCAGAGTGGCT 1254
                                                                                                                                                                                                                                                                                                                                                                                         AGACTTCTCTCTC 1554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGAGTTCAACCCA 1374
```

멍 ঠ

্য

S B ঠ 멍 망 ঠ 멍 ર્શ 밁 Ś 8 \$ 뮍 á 밁 á 멍 S 밁 ঠ

ર્

640

Ş

620

В

2095

밁 S

600

AGGTTTAGATTTG

979

ACCGAAGAAACAG

3231

rThrLysLysGln

999 3171

CTCAGAATACTGC rSerGluCysCys

3291

1019

```
GluAsnGluLysPheAlaGluValGlyValLysAlaHisHisLeuIleGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IleHisVal
                                                                                                                                                                                                                                                                                                                             GTTACCGAACGGGAGATTGTT
                                                                                                                                                                                                                                                                                                                                                                                               AGCAGTGAAGTCAAGCCCATGACTCAGACTGAACAAAAAAGAAGTCATTAGTAAATTTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGTGGGCCATTCAAATGGAGAAAAAAGCTGCTAAAGACGGAAATCGCAAAGATCGCGTC
                                                                                                                                 ACTGGCGAAATAAATCTGCTTATCGCTACGACGGTGGCAGAGGAAGGCCTGGATATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ThrGlyLysIleAsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SerSerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGGAATTATTTTTACAAAAACACGACAGAGCACCTACGCACTTTCCCCAGTGGATCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgGlyIleIlePheThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThr
                 IleValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGlu
   Ŝ.
                                                                IleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyr
|||||||||||
|ATTGAGAAGATGCATCATGTCAATATGACACCAGAATTCAAGGGACTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    eGlyAlaGlyHis
     GACCAATGGAGAG
                                                                                                                                                    'sSerGlyGluAsp
                                                                  CTCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                               839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                819
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2094
                                959
                                                                  3051
                                                                                                                                  2991
                                                                                                                                                                                                                                    899
                                                                                                                                                                                                                                                                    2871
                                                                                                                                                                                                                                                                                                    879
                                                                                                                                                                                                                                                                                                                                   2811
                                                                                                                                                                                                                                                                                                                                                                   859
                                                                                                                                                                                                                                                                                                                                                                                                   2751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2211
RESULT 15
AAS40960
ID AAS40
XX
AAS40
AC AAS40
XX
I1-DE
XX
I1-DE
XX
CDNA
XX
Human
XW
Higas
XW
Homo
XX
Homo
XX
Homo
XX
I1-DE
XX
I1-DE
XX
I1-DE
XX
I1-DE
XX
I1-DE
XX
I1-DE
XX
I1-JU
PR
I1-AU
PR
II-AU
PR
II-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   유 성 유 상 유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       र्
 31-JAN-2000;
04-FEB-2000;
24-FEB-2000;
16-MAR-2000;
11-MAR-2000;
19-MAY-2000;
07-JUN-2000;
07-JUL-2000;
07-JUL-2000;
07-JUL-2000;
11-JUL-2000;
11-JUL-2000;
14-JUL-2000;
14-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; oxidoreductase enzyme; transferase; hydrolase; lyase; isomerase ligase; hyperproliferative disorder; immunodeficiency disorder; autoimmune disorder; neurological disorder; metabolic disorder; inflammatory disorder; cardiovascular disorder; reproductive disorder; blood-related disorder; infectious disorder; gene therapy; cytostatic; anti arthritic; nephrotropic; anticoagulant; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAS40960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAS40960;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTATCTGCAAGTGTGGCCAGGCTTGGGGAACAATGATGGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuPheSerAspGluAsp
|||:::|||||||||||
TTGTATAGTGATGAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProCysLeuLysIleArgAsnPheValValValPheLysAsnAsnSt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    standard;
 2000US-0179065P.
2000US-0180628P.
2000US-0184664P.
2000US-0189874P.
2000US-0198123P.
2000US-029467P.
2000US-0214886P.
2000US-0216647P.
2000US-0216647P.
2000US-0217487P.
2000US-0217496P.
2000US-0217496P.
2000US-0225213P.
2000US-0225214P.
2000US-0225268P.
2000US-022575P.
2000US-022575P.
2000US-022575P.
2000US-022575P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001WO-US001239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   enzyme
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #176.
```

yase; isomerase; isorder;

Ş

820

2692

840

ঠ

940

S

밁 5 멍 5

2932

2872

880

900

당 र् 밁 δ 뮍

2812

960

Ś

800

밁

2572

멍

2632

Ş

780

S

760

밁

2452

밁

2512

र्

8 Ş 당 Ş

2392

720

2332

700

유성

2272

680

g

2212

660

8 B

2155

```
Alignment Scores:
Pred. No.:
Score:
Percent Similarity:
Best Local Similarit;
Query Match:
                                                                                                                                                        $\forall \color 
                                                                                                                                                                                        The present invention relates to the isolation of novel human enzyme CC polypeptides (AAU22915-AAU23814), and the cDNA and genomic sequences concoding them. The enzyme polypeptides of the invention may comprise the functional classes of oxidoreductases, transferases, hydrolases, lyases, comprise the disonderses or ligases. The sequences of the invention are useful in the clistochers including hyperproliferative disorders (e.g. arthritis), neurological disorders (e.g. AIDS) autoimmune disorders (e.g. cancer), cardiovascular disorders (e.g. atherosclerosis), blood-related disorders (e.g. haemophilia), reproductive disorders (e.g. infertility) and cinfectious disorders (e.g. Influenza). The polynucleotides of the invention can also be used in gene therapy. AAS40785-AAS41684 represent convention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-NOV-2000;
01-DEC-2000;
01-DEC-2000;
05-DEC-2000;
05-DEC-2000;
06-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
11-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
08-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel polypeptides and I treating neural, immune cardiovascular, renal, I
                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HUMA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ÇĄ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Barash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000US-0249207P.
2000US-0249210P.
2000US-0249211P.
2000US-0249218P.
2000US-0249244P.
2000US-0249244P.
2000US-0249264P.
2000US-0249264P.
2000US-0249264P.
2000US-0250160P.
2000US-0250198P.
2000US-02511868P.
2000US-02511869P.
2000US-0251989P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IJ
                                                                                                                                                          вP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENOME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SC,
                                                                                                                                                          723
 5.66e-251
3176.00
97.1%
96.8%
59.8%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SCI
                                                                                                                                                          Α.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         polynucleotides useful for diagnosing, preventing, e system, muscular, reproductive, pulmonary, proliferative disorders and cancerous diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ruben
                                                                                                                                                          344
                                                                                                                                                          Ç
                                                                                                                                                          416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English.
Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                          <u>ن</u>
                                                                                                                                                          476
                                                                                                                                                          Ţ,
                                                                                                                                                          0
     1967
636
2
18
                                                                                                                                                            ω
                                                                                                                                                            ဝ္ဂ
                                                                                                                                                            her;
```

22-AUG-2000;
23-AUG-2000;
23-AUG-2000;
01-SEP-2000;
01-SEP-2000;
01-SEP-2000;
05-SEP-2000;
06-SEP-2000;
08-SEP-2000;
08-SEP-2000;
08-SEP-2000;
08-SEP-2000;
114-SEP-2000;

2000US-0226681P.
2000US-0227009P.
2000US-0229344P.
2000US-0229344P.
2000US-0229344P.
2000US-0229344P.
2000US-022931244P.
2000US-02311243P.
2000US-02311244P.
2000US-02311414P.
2000US-02311414P.
2000US-02311414P.
2000US-02311414P.
2000US-02311414P.
2000US-0231244P.
2000US-0231244P.
2000US-0231244P.
2000US-0231244P.
2000US-0231244P.
2000US-0231249P.
2000US-0231249P.
2000US-0231249P.
2000US-0231368P.
2000US-0231368P.
2000US-0231368P.
2000US-0231368P.
2000US-0231368P.
2000US-023178P.
2000US-023178P.
2000US-023637P.
2000US-0236611P.
2000US-0246611P.

D Qy	dg Q	Qy db	Db Qy	QQ db	Qy db	dd Yo	dg VQ	D Qy	P 64	g	dg Qy	D Qy	Db Qy	d dd	Дb
934 GluPheLy8GluLeuTyrIleValArgGluAsnLy8AlaLeuGlnLy8Ly8 950 	914 AlaCysSerGlyGluAspIleHisVallleGluLysMetHisHisValAsnMetThrPro 933 	4 LysHisTyrLysAsnAsnProSerLeuIleThrPheLeuC	874 LeuGluLeuGlnMetGlnSerIleMetGluLysLysMetLysThrLysArgAsnIleAla 893 1736 TTGGAATTACAGATGCMAAGTATAATGGAAAAAGAAAATGAAAAACCAAGAGAAAATATTGCC 1795	854 MetTyrLysalaileHisCysValGlnAsnMetLysProGluGluTyrAlaHisLysIle 873 	4 AlaHisSerGlySerGlyValIleGluHisGluThrValAsnAspPheArgGluLysMet 8	814 IleAlaMetValGlnAlaArgGlyArgAlaArgAlaAspGluSerThrTyrValLeuVal 833 	794 GluGlyLeuAspIleLysGluCysAsnIleValIleArgTyrGlyLeuValThrAsnGlu 813 	74 Valile 43 GTCATT	754 LeuIleGlyAlaGlyHisSerSerGluPheLysProMetThrGlnAsnGluGlnLysGlu 773 	734 LeuSerGlnTrpIleThrGluAsnGluLysPheAlaGluValGlyValLysAlaHisHis 753 	14 ArgT 63 AGGA	694 ProGluTyrGluAsnGluLysLeuThrLysLeuArgAsnThrIleMetGluGlnTyrThr 713 	674 ArgPheLeuMetThrLeuPhePheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsn 693 	54 Cys 83 TGT	

Search completed: March 12, 2006, 22:52:31 Job time : 2545 secs

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run
                                                                                                                                    Result
                                                                                                                                                                                                                                                                                                                                                                                                                     Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                             -MODEL=frame+ p2n.model -DEV=xlh
-Q=/abss/ABSSWEB_spool/US09515363/runat_10032006_181130_7973/app_query.fasta_1
-Q=/abss/ABSSWEB_spool/US09515363/runat_10032006_181130_7973/app_query.fasta_1
-DB=EST -QFMT=fastap -SUFFIX=rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi -LIST=45
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15 -MODE=LOCAL
-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000 -HOST=abss04
-USER=US09515363_@CGN_1_1_5315_@runat_10032006_181130_7973 -NCPU=6 -ICPU=3
-NO_MMAP -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG -DEV_TIMEOUT=120
-NORMAP -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG -DEV_TIMEOUT=120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                      ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           91:
          100400
                                                                                                                                                                                            Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 score:
                                                                                                                      Score
   5250
4879
2673
2633
1597
1376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xgapop 10.0,
Ygapop 10.0,
Fgapop 6.0,
Delop 6.0,
                                                                                                                     Query
Match
                                                                                                                                                                                                                                                       US-09-515-363C-2
5311
1 MSNGYSTDENFRYL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41078325 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          March 13,
   98.9
91.9
50.3
49.6
30.1
25.9
25.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSNGYSTDENFRYLISCFRA.....LPITFPNLDYSECCLFSDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore
Copyright (c) 1993
                                                                                                                                                                                                                                                     gb_gss1:*
gb_gss2:*
gb_gss3:*
                                                                                                                                                                                                                                                                                             gb est2:
gb est3:
gb est4:
gb est5:
gb est5:
gb est5:

                                                                                                                                                                                                                                                                                                                                                                                                  gb_est1:*
                                                                                                                      Length
   3078
3078
2304
2331
1013
870
2530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2006, 15:21:08; Search time 9400 Seconds (without alignments) 5101.783 Million cell up
                                                                                                                       BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapext
Ygapext
Fgapext
Delext
     44674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23393541228
  DQ050960
DQ050961
AK037057
AK040519
BQ233683
BQ960157
CR857114
                                                                                                                       IJ
                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                - 2006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5.1.7
Biocceleration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82156650
DQ050960 Homo sapi
DQ050961 Pan trogl
AK037057 Mus muscu
AK040519 Mus muscu
BQ233683 AGENCOURT
BQ960157 AGENCOURT
CR857114 Pongo pyg
                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ltd.
                                                                                                                                                                                                           printed,
```

Ω	O	ი		•	a								ი	ი	a	ი					Ω														
444	4 2	41	40	9	38	37	ა 6	35	34	ω U	32	W	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	œ
903.5	911.5	28	ū	942	ശ	949.5	UT.	954	ıa	989.5	990	990.5	994	1016	1016	1016	1019	1021.5	1045	1055.5	1059	1066	1078	1081.5	1083	1094.5	1098	1122	1122	1129	1186	•	21	N	•
17.0	1.7	7.	7	7	7	7.	7.	ω.	ω.	ω.	8	œ	œ	9	9	9	9	9	9	9	9					0		<u>. </u>	_		ν.	N	N	ω.	4.
2398 2398	368 568	701	869	674	647	585	932	682	882	1611	672	911	671	672	672	672	582	800	4098	1239	755	1046	627	4	653	æ	N	φ	7	N	690	ဌ	11	J	\vdash
414	w	σ	7	7	σ	w	N	δ	œ	w	თ	w	თ	w	w	w	μ	7	4	ω	ហ	w	ហ	N	7	N	N	4.	ហ	N	œ	Ŋ	ω	ហៈ	U
AM039330 BC027369	117	12386	484	V1944	42426	21004	BG967530	361	8	523	3925	5499	85	2	$\mathbf{-}$	9	w	***	\sim	M46777	7283	7696	9292	8204	75205	68640	74	1860	78	323	DR422160	BF337464	679	020	98
9330 AM0393 7369 Mus mu	4 QV3-BN0	423868 UI-F	48417	94473 SnESTba	598511	BP21004	BG967530 602833306	CF363618 833509 MA	DN081906 JGI_CABD1	BM455238 AGENCOURT	CA339255 NISC_lx12	BI454996 603173580	CB453859 709752 MA			CM3-CT02	AU310289 AU310289	CO396840 AGENCOURT		BM467774 AGENCOURT	BQ772836 UI-H-FE0-	BM476961 AGENCOURT			DKFZp469		46 6026318	Mus musc	ü	36 6023058	50 nav08g05	64 602035	83 AGENCOUR	02097	BU189982 AGENCOURT

Homo sapiens MDA5 gene, genomic survey sequence DQ050960 DQ050960 survey sequence 04159 3078 bp VIRTUAL DNA linear TRANSCRIPT, partia r GSS 02-JUN-2005 ial sequence,

ALIGNMENTS

RESULT 1 DQ050960 LOCUS

DEFINITION

AUTHORS	REFERENCE				ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	
Nielsen, R., Bustaman	1 (bases 1 to 3078)	Hominidae; Homo.	Mammalia; Eutheria;	٠.	Homo sapiens	Homo sapiens (human)	GSS.	DQ050960.1 GI:66904	DQ050960	•

Chordata; Craniata; Vertebrate Euarchontoglires; Primates; nta; Euteleostomi; Catarrhini;

Nielsen, R., Bustamante, C., Clark, A.G., Glanowski, S., Sackton, T.B., Hubisz, M.J., Fledel-Alon, A., Tanenbaum, D.M., Civello, D., White, T.J., Sninsky, J.J., Adams, M.D. and Cargill, M.

A. Scan for Positively Selected Genes in the Genomes of Humans and

15869325 2 /L-(er) PLoS Biol. 3 (6), E170 (2005) TITLE

Chimpanzees

JOURNAL PUBMED REFERENCE AUTHORS COMMENT TITLE JOURNAL 2 (bases 1 to 3078)
Nielsen,R., Bustamante,C., Clark,A.G., Glanowski, Hubisz,M.J., Fledel-Alon,A., Tanenbaum,D.M., Cive White,T.J., Sninsky,J.J., Adams,M.D. and Cargill, Direct Submission This sequence them based on Submitted (05-MAY-2005) Celera Genomics, Rockville, MD 20850, USA was made by alignment. γ sequencing genomic Translation starts 45 West exon ,S., Sackton,T.B., ello,D.,
,M. ns and ordering the beginning of Gude Drive,

Db 97	Q V	8 8	P 6	D Qy	g &	φ φ	Qy db	g Q	Db Qy	D Qy	A A	c C	Query Ma DB:	Pred. No. Score: Percent S	ORIGIN	gen	FEATURES Bourc
AAGAGCAACTTCTTTCAACCACAGTTCAGC luAsnAsnSerSerGluSerSerPheAlaA 	01 GATTGCTCAGAAAGCAATGCAGAGATTGAGAAATTTATCACAAGTTGATGGTCCTCAAGTG 66 21 GluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGlyMet 24 21	01 AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal 2	181 PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySer 200 TTTCTGAATGTTCCTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCT 600	161 GluSerGlyValArgGluLeuLeuLyBArgIleValGlnLyBGluABnTrpPheSerAla 180 	41 GluGluL 21 GAGGAAC	121 LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu 140	101 AspLeuProSerProSerPheGluAsnAlaHisAspGluTyrLeuGlnLeuLeuAsnLeu 120 	81 GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAgnProGluLeuThr 100 	LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal 	41 GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu 60 	ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla 4	1 MetSerAsnGlyTyrSerThrAspGluAs	Ch: 98.9% Indels: 11 Gaps:	. SCOIES: 0 5250.00 imilarity: 99.1%		/moi_type="genomic bwa /db_xref="taxon:9606" /chromosome="2" e <1>3078	Location/Qualifiers e 13078 /organism="Homo sap
Q	Q dd	B 6	₽ \$, B &) pb Qy	B \$	S B &	S	р Q	Db Qy	g dg Qy	dg VQ	Db Qy	ОУ	dd VQ	P 49	Q dd
601 AlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIle 620	581 TrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsnArgLysGluArgValCys 600 	561 IleGlnThrTyrCy8GlnMetSerProMetSerAspPheGlyThrGlnProTyrGluGln 580 	1 THEATRAS PATRITITATS GENERALLY SHEWENS WITH THE PROPERTY OF THE PROPERTY O	VallysGiuashleuaspGinleubysashGinileGinGiuliCyshyshyssieala 3.	O1 LysalaGluGluHisIleLeuLysLeuCysalaAsmLeuAspAlaPheThrileLysThr 52	CTTCCTCAGATACTGGGACTAACAGCTTCACCTGGTGTTGGAGGGGCCACGAAGCAAGC		: \c\y8\18\1\8\n\y8\1\y8\1\\\\\\\\\\\\\\\\\\	LeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeuIle 44	ProGluvalvalvaserCyBASpilellelleSerThTAlaGInlleLeuGluAShSer 42 [LeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSerPhe 40	ValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPhe 38	341 TyrīleAlaLysAspHisLeuAspLysLysLysLysAlaSerGluProGlyLysVallle 360 	ThrA:	301 SerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeu 320 	281 GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaArgAla 300 	261 SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsnMet 280 781 AGTTTGGCAGAAGGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAACATG 840

S

음 성 음

음 성

유

S

```
2881
                                                                                                                                                    2701
                                                                                                                                                                                            2641
                                                                                                                                                                                                                                   2581
                                                                                                                                                                                                                                                                          2521
                                                                                                                                                                                                                                                                                                                 2461
                                                                                                                                                                                                                                                                                                                                                         2401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1861
                                                                                                                                                                                                                                                                                                                                                                                                 2341
                                                                                                                                                                                                                                                                                                                                                                                                                                        2281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2041
                                                                                         941
                                                                                                                                                                       901
                                                                                                                                                                                                              881
                                                                                                                                                                                                                                                     861
                                                                                                                                                                                                                                                                                                                                     821
                                                                                                                                                                                                                                                                                                                                                                            801
                                                                                                                                                                                                                                                                                                                                                                                                                    781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       641
                                                                                                                                                                                                                                                                                                                                                                                                                                                           761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 701
                                                                                                                         HisVal
                                                                                                                                                                                                                                                                                                                GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                    ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle
                                                                                                                                                                                                                                            ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetGlnSer
                                                                                                                                                                                                                                                                                                                                                       CysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                           GlyLysIleAsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLysGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTy
                                                                                                             CATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATT
                                                                                                                                                   SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle
                                                                                                                                                                                                   IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro
                                                                                                                                                                                                                                                                                                                                                                                                 GGAAAAATAAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyIleIlePheThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThrGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspAspLeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhe
                                          IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                                                                                                                                          ATCGAACGTGAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATACATTGT
                                                                                                                                                                                                                                                                                    IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAATAATCTTTACAAAAACACGACAGAGTGCATATGCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArg
                                                                                                                        eGluLysMetHisHi
||||||||||||
                                                                                                                       .sValAsnMetThrProGluPheLysGluLeuTyrIle
                               CAAAGGCTTAGATTTGCCT
                              2940
                                                  980
                                                                      2880
                                                                                         960
                                                                                                            2820
                                                                                                                                940
                                                                                                                                                    2760
                                                                                                                                                                       920
                                                                                                                                                                                          2700
                                                                                                                                                                                                              900
                                                                                                                                                                                                                                                     880
                                                                                                                                                                                                                                                                                                                2520
                                                                                                                                                                                                                                                                                                                                     840
                                                                                                                                                                                                                                                                                                                                                         2460
                                                                                                                                                                                                                                                                                                                                                                            820
                                                                                                                                                                                                                                                                                                                                                                                                2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1920
                                                                                                                                                                                                                                  2640
                                                                                                                                                                                                                                                                          2580
                                                                                                                                                                                                                                                                                             860
                                                                                                                                                                                                                                                                                                                                                                                                                   800
                                                                                                                                                                                                                                                                                                                                                                                                                                       2340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2220
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                          780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2100
                                            В
                                                               Ş
                                                                                                        S
           유
                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
```

유 양 명 중 음 양 음 송

5 B 5

음 성 음 성

음 &

8 8 8

음 성 음 성

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 2
DQ050961
LOCUS
DEFINITION
                                                                                                                                                                                          Query
DB:
                                                                                                                                                                                                                                                              Alignment Pred. No.:
                                                                                                                                                                US-09-515-363C-2
                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                         Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2941
121
                                                                                                                                                                                                                                                                           Scores:
                       41
                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pan troglodytes N
genomic survey so
DQ050961
DQ050961.1 GI:60
GSS.
                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             l (bases 1 to 30/8)
Nielsen,R., Bustamante,C., Clark,A.G., Hubisz,M.J., Fledel-Alon,A., Tanenbaum, White,T.J., Sninsky,J.J., Adams,M.D. an A Scan for Positively Selected Genes in Chimpanzees
(er) PLoS Biol. 3 (6), E170 (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DQ050961
Pan trogl
                                                                                                          \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                          2 (bases 1 to 3078)
Nielsen,R., Bustamante,C., Clark,A.G., Glanowski,S., Sackton,T.B., Hubisz,M.J., Fledel-Alon,A., Tanenbaum,D.M., Civello,D., White,T.J., Sninsky,J.J., Adams,M.D. and Cargill,M.
Direct Submission
Submitted (05-MAY-2005) Celera Genomics, 45 West Gude Drive, Rockville, MD 20850, USA
This sequence was made by sequencing genomic exons and ordering them based on alignment. Translation starts at the beginning of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (er) PLoS
15869325
                                                                                                                                   \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pan troglodytes
Pan troglodytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hominidae; Pan.
1 (bases 1 to 3078)
                                                                   ArgValLy
                GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnM
GAGGTGA
                                                                                                                        MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS
                                                                                                          ATGTCGAATGGGTGTTCCACAGACGAGAATTTCCGCTATCTCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAA
                                                                                                                                                              (1-1025) \times
                                                                                                                                                                                                                                                                                                                                               /organism="Pan troglodytes"
/mol_type="genomic DNA"
/db_xref="taxon:9598"
<1._.>3078
                                                               ysMetTyrIleGlnValGluProValLeuAspTyrLeuT
                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                 'gene="MDA5"
'locus_tag="HC18981"
                                                                                                                                                                                          0
4879.00
93.1%
92.9%
91.9%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:66904160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                s MDA5 gene,
                                                                                                                                                                DQ050961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (chimpanzee)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebra Euarchontoglires; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3078 bp
ne, VIRTUAL
                                                                                                                                                                (1-3078)
                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA lin
TRANSCRIPT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ., Glanowski,S., Sackton,T.B.,
um,D.M., Civello,D.,
and Cargill,M.
in the Genomes of Humans and
                                                                                                                                                                                           3078
952
2
71
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear GSS 02-JUN-2005
PT, partial sequence,
             etGlnAlaValGlu 60
                                                                                                        erCysPheArgAla 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ta; Buteleostomi;
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGAATGCTGTTTA 3060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          erGluCysCysLeu 1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAAAGAAACAATAC 3000
GCAGGCAGTTGAA 180
                                                    hrPheLeuProAla 40
                                                     120
```

8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	?
81 GLUALS LEAVAGAC TITOGLOMOGGACCT TOCOCOCCIC CONTROL TO ANTOCOCCIC CONTROL TO ANTOCOCCA CONTROL CONTR	ס בעסקסיין נוסיים באשרים היים באינה ויים באינה ויים באינה היים באינה היים האשרים היים בהיים בהיים בהיים בהיי
	-
6 8	
441 1161 AARTHOCHAANTOCHOCHOCHOTTCAATTOCACTTCACTTCACTCACTTCACT	

```
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                     REFERENCE
AUTHORS
TITLE
JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 3
AK037057
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           र्ठ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             981
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              961
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             841
10349636
2
Carninci,
Itoh, M., 1
                                                                                                                                                                                                                                                                          sequence.
AK037057
AK037057.1
HTC; CAP tra
                                                                                Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                   Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Euarchontoglires; Glires; Rodentia;
                                                                                                                                                                                                                                                                                                                                                         AK037057

AK037057

AK037057

Mus musculus adult female vagina cDNA, RIKEN full-length library, clone:9930105B04 product:similar to MELANOMA DIFFERENTIATION ASSOCIATED PROTEIN-5 [Homo sapiens], full
                                                                                                                                                                                                                                                     Mus
                                                                                                                                                                    Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAspIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetGlnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAAAAGTGGGTAGAATTACCTATCACATTTCCCCAATCTTGACTATTCAGAATGCTGTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCysLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCAACAAAGAAACAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATPATGGAAAAGAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATAACCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTTCAAAATATGAAACCAGAGGAGTATGCTCATAAGATTTTGGAATTACAGATGCAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTCGAGCCAGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGCGGTTCAGGAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGTAACATTGTTATCCGTTATGGTCTCGTCACCAATGAAATAGCCATGGTNNNNGCCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CY8AsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGAAAAATAAATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CysLeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>ATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCT</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATCGAACGTGAGACAGTTAATGATTTCCCGAGAGAAGATGATGTATAAAGCTATACATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuPro
                                                                                                                                                                                                                                                     musculus (house mouse)
                                                                                                                                                                                                                                                                       CAP trapper.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'AATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTTACATT
   P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3075
                                                                                                                                                                                                                                                                                                                                                                                                                             03-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                      enriched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 940
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                     SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P. Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takada, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
The FA
Group
                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)

CDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.

Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carminci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Group Phase I & II Team.
Analysis of the mouse transcriptome of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                      prepare mouse tissues.
Please visit our web site for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 420, 563-573 (2002) 6 (bases 1 to 2304)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Functional annotation of a Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FANTOM Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Normalization and subtraction of cap-trapper-selprepare full-length cDNA libraries for rapid dis-
Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11076861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FANTOM Consortium and the
                                                                                                                                                                                      /organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="FANTOM_DB:9930105B04"
/db_xref="taxon:10090"
/clone="9930105B04"
 /note="unnamed protein product; putative similar to MELANOMA DIFFERENTIATION ASSO [Homo sapiens] (SPTR | Q9H3G6, evidence: F67.6%length, match=2079)"
                                                                                /tissue_type="vagina"
/clone_Tib="RIKEN full-length
/dev_stage="adult"
224. ..>2302
                                                                                                                                                                      sex="female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Exploration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                full-length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Research
                                                                                                                                                                                                                                                                                                                                                                                                      further
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIKEN Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            based
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Group
                                                                                                                              enriched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Explo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Phase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            functional annotation
                                                                                                                              mouse cDNA library"
                        OCIATED PROTEIN-5 FASTY, 75.6%ID,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ration Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ected cDNAs to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       covery of new genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Team and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Carninci, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kawai, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
```

```
Alignment Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-515-363C-2 (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scores:
                                                                                                                  704
                                                                                                                                                                 644
                                                                                                                                                                                                                584
                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                               524
                       824
                                             201
                                                                    764
                                                                                            181
                                                                                                                                           161
                                                                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                                             464
                                                                                                                                                                                                                                                                                                                                                            404
                                                                                                                                                                                                                                                                                                                                                                                                           344
                                                                                                                                                                                                                                                                                                                                                                                                                                                          284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       224
                                                                                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                  41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21
                                                                                                                                                                                                                                                                                                            GAGT
                                                                                                                               GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla
                                                                                                                                                                                                                           LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu
                                                                                                                                                                                                                                                                            GAAACCAAAGAGCAGATTCTTAAAAAGATCAACACCTGTGGTAACACCAGCGCGGCAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                             GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                       GCTGCCCAGAAGACACAGAGTTGGCTAACTCGTCTCACAGAGAT
                                                                    GATOTGCCCTCTCCTTCCTCTGAGACTGCCCATGACGAGTGTCTCCACTTGCTGACCCTC
 GluGluGlnLeuLeuSerThrThrValGlnPro>snLeuGluLysGluValTrpGlyMet
                                             AspÇysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal
                                                                                                                                                                                                                 CTCCAGCCCACTTTGGTGGACAAACTTCTGATTAACGATGTCTTGGACACTTGCTTCGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /codon_start=1
/protein_id="BAC29687.1"
/protein_id="BAC29687.1"
/db_xref="GI:26331914"
/translation="MSIVCSAEDSFRNLILPERPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSAEDSFRNLILPERPRLKMYIQVEPVLDHLIFLSAETKE
/ILKKINTCGNTSAAELLLSTLLQQQWPLGWTQMFVEALEHSGNPLAARYVKPTLTDL
PSPSSETAHDECLHLLTLLQPTLVDKLLINDVLLDTCFEKGLLTVEDRNRISAAGNSGN
ESGVRELLRRIVQKENWFSTFLDVLRQTGNDALFQELTGGGCPEDNTDLANGSHRDGP
AANECLLPAVDESSLETEAWNVDDILPEASCTDSSVTTESDTSLAEGSVSCFDESLGH
NSNMGRDSGTMGSDSDESVIQTKRVSPEPELQLRPYQMEVAQPALDGKNIIICLPTGS
GKTRVAVYITKDHLDKKKQASESGKVIVLVNKVMLAEQLFRKEFNPYLKKWYRIIGLS
GDTQLKISFPEVVKSYDVIISTAQILENSLLNLESGDDDGVQLSDFSLIIIDECHHTN
KEAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPQILGLTASPGVGAAKKQSEAEKHIL
NICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLEIMASIQTYC
QKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEALQINDTIRMIDAY
SHLETFYTDEKEKKFAVLNDSDKSDDEASSCNDQLKGDVKKSLKLDETDEFLMNLFFD
                                                                                                                   3.49e-275
2673.00
84.3%
75.6%
50.3%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     x AK037057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-2304)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2304
525
60
107
                         GGCCTGCAGCT
                                                                                                                                                                                                                                                                                      120
                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                      100
                         883
                                                                      823
                                                                                                                                                                                          160
                                                                                                                                                                                                                  643
                                                                                                                                                                                                                                       140
                                                                                                                                                                                                                                                                583
                                                                                                                                                                                                                                                                                                              523
                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20
  240
                                                                                                   δ
β
                                                                                                                                                5
                                                                                                                                                                              g
                                                                                                                                                                                             5 유
                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                          日
                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                     밁
                                                   र्
                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1004
                                                                                                                                                                                                                             1664
                                                                                                                                                                                                                                                                                                                           1544
                                                                                                                                                                                                                                                                                                                                                                          1484
                                                                                                                                                                                                                                                                                                                                                                                                                         1424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1244
                                                                                                                                 1784
                                                                                                                                                                               1724
                                                                                                                                                                                                                                                                            1604
                                                                                  1844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                         540
                                                                                                                                                                                                      500
                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                    460
                                                                                                                                                                                                                                                                                                                                                  440
                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                               400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           884
             580
                                                                                                                                                                              AlaLysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspA:
::::::||||||:::||||||||||
TCTGAGGCTGAAAAACATATTTTAAATATATGTGCCAATCTTGATG
                                                                                                                                                                                                                                                                           AGTTTGGCAGAAGGAAGTGTCAGCTGCTTCGATGAAAGTCTTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACGACATATTACCAGAGGCTTCTTGTACAGATTCGTCTGTGACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGAGTGTCTTCTGCCTGCTGTCGATGAGTCAAGTCTGGAGACAG
GlnTrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsnA
                                                                                 ATTATCATTGATGAGTGCCATCACACCAACAAGGAGGCAGTCTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ValTyrI1eAlaLysAspHisLeuAspLysLysLysLysAlaSerG:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTATCCCCCGAGCCAGAACTGCAGCTCAGGCCTTACCAAATGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValS
                                   AGCATTCAGACTTACTGCCAAAAAAAGTCCAATGTCAGATTTTGGAA
                                                   ArgIleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyT
                                                                                                                                                                                                                                            ProLeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyG
                                                                                                                                                                                                                                                                                                                                                                                     SerLeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuS
                                                                                                                                                                                                                                                                                                                                                                                                                                    IleValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTTACATCACCAAAGATCACTTAGACAAGAAGAAGCAGCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaSerProGluProGluLeuGlnLeuArgProTyrGlnMetGluVa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCAGGGATTCAGGCACCATGGGAAGTGATTCAGATGAAAGTGTCA
                                                                                                                                  ACAGTGAAAGAGAATCTTGGTCAACTCAAACACCAAATAAAGGAAC
                                                                                                                                            ThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluP
                                                                                                                                                                                                                                                                                                                                                                            TCCCTCTTAAATCTGGAGAGTGGAGACGATGACGGTGTGCAGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                          TTTCCAGAAGTTGTCAAATCTTACGATGTTATTATCAGCACTGCTC
                                                                                                                                                                                                                                                                                                                                      |ellelleAspGluCysHisHisThrAsnLysGluAlaValTyrAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAATAAGGTAATGTTAGCAGAACAAC
                                                                                                                                                                                                                               [GGTGTTGGAG
                                     CCCAACATTATGAG 1963
                                                                                                                                                                                                                              CAĠĊĊAAAÁÁĠĊÁĠ 1723
                                                                                                                                                                                                                                                 lyAlaThrLysGln 499
                                                                                                                                                                                                                                                                                                                                                                                                                                        lnIleLeuGluAsn 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCTGAAAATATCA 1423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                reecceaaceaeci 1183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rccagacaaaaaga 1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          isAsnSerAsnMet 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGAATCAGACACA 1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           || ||| :::
AGGCCTGGAACGTA 943
                                                                                                                                   CATGCAAGAAATTT 1843
                                                                                                                                                                                                                                                                                                                                                                                                                           NAATCCTTGAAAAC 1483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAGTTCAACCCA 1363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATCCGGGAAGGTT 1303
                                                                                                                                                                                              |aPheThrIleLys 519
|||||||||||||
                                                                                                                                                                                                                                                                                             nLysProVallle 479
                                                                                                                                                                                                                                                                                                                             CAACATCATGAGA 1603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   uProGlyLysVal 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            )rGluSerAspThr 260
:|||||||||
  gLyeGluArgVal 599
                                                                                                                                              OCYSLYSLYSPhe 539
                                                                                                                                                                                CTTTACCATTAAA 1783
                                                                                                                                                                                                                                                                                                                                         nAsnIleMetArg 459
                                                                                                                                                                                                                                                                                                                                                                                       :rAspPheSerLeu 439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              eThrArgValAla 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       lAlaGlnProAla 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     l---AlaAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAACAGCAACATG
                                                         rGlnProTyrGlu 579
                                                                                    AGAAATTATGGCA 1903
                                                                                                                                                                                                                                                                              CAAACCAGCCATT 1663
                                                                                                                                                                                                                                                                                                                                                                             AGACTTCTCTCTC 1543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nLeuLysIleSer 399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sGluPheGlnPro 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACCAGAGTGGCT 1243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1063
```

S

S

뭐 5 뭐 Ş 뭐 5 B ક 뮍 5 g Ş 멍 δ Ś

日 S 밁 5

```
JOURNAL
PUBMED
REFERENCE
AUTHORS
 JOURNAL
REFERENCE
                                                                                                                      TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
AK040519
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           640
                                                                                                                                                                                                                                                           Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P. Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Ohara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J. Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and Hayashizaki, Y. Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new Genome Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Euarchontoglires; Glires; Rodent Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
Analysis of the mouse transcriptome of 60,770 full-length cDNAs Nature 420, 563-573 (2002) 6 (bases 1 to 2331)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HTC; CAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
AK040519
AK040519.1 GI:26333792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AK040519

2331 bp mRNA linear HTC 03-APR-2004 Mus musculus 0 day neonate thymus cDNA, RIKEN full-length enriched library, clone:A430105A06 product:similar to MELANOMA DIFFERENTIATION ASSOCIATED PROTEIN-5 [Homo sapiens], full insert
                                                                                                                                        Nature
                                                                                                                                           Functional annotation of a Nature 409, 685-690 (2001)
                                                                                                                                                                                    FANTOM Consortium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11042159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTTTGATAACAAGAAATGTTGAAAAAACTAGCTGAAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PhePheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ĠTĊCTC---AATGAĊAĠĊĠAĊAAGAGTGATĠAĊGAGGCCAGCAGTTGCAATĠAĊCAACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VallleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAsp
||||::: :::||||||||||:::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGTGGGCCATTCAAATGGAGAAAAAAGCTGCTAAAGACGGAAATCGCAAAGATCGCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAGGGCGATGTAAAGAAATCTTTGAAACTGGACGAAACGGATGAATTTCTCATGAATTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IleAspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAla
                                                                                                  FANTOM Consortium and the
                                                                                                                                                                                                       RIKEN Genome Exploration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       musculus (house mouse)
                                                                                Phase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        trapper.
                                                                                  Ŗ٦
                                                                                  II Team.
                                                                                                                                                              full-length
                                                                                                                                                                                                       Research
                                                                                                     RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cloning
                                                               based
                                                                                                     Genome
                                                                                                                                                                                                     Group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Glires; Rodentia;
                                                                                                                                                               mouse
                                                             9
                                                                                                     Exploration
                                                                                                                                                                                                     Phase II
                                                                                                                                                               CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               693
                                                                                                                                                                 collect:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                       Team and
                                                                                                      Research
                                                                annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                genes
                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2083
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          619
                                                                                  Query
DB:
                                                                                                                                                                                     Pred
   S
                                                                                                                      Best Local Similarity:
                                                                                                                                                                  Score:
                                            US-09-515-363C-2
                                                                                                                                           Percent Similarity:
```

No.:

Match:

7.06e-271 2633.00 84.2% 75.6% 49.6%

Length:
Matches:
Conservative:
Mismatches:
Indels:

2331 517 59 106 2

MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleS

erCysPheArgAla 20

 $(1-1025) \times AK040519$

(1-2331)

S

र् 밁 Ś 밁 S 밁 ঠ 멍

```
Alignment
                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sdo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Cari Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, W., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozan, Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Kasukawa, Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Murata, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohno, M., Ohno, A., Saito, R., Saitoh, H., Sakai, C., Sakai, K., Sakaz, Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tagami, M., Tagawa, A., Takahashi, F., Takaku-Akah. Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y.
Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/, Tel:81-45-503-9222, Fax:81-45-503-9216)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA library was prepared and sequenced in Mouse C
Encyclopedia Project of Genome Exploration Researc
Genomic Sciences Center and Genome Science Laborat
Division of Experimental Animal Research in Riken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              prepare mouse tissues.
Please visit our web site for further
URL:http://genome.gsc.riken.jp/.
URL:http://fantom.gsc.riken.jp/.
Location/Qualifiers
1. .2331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                                                                                       /codon start=1
/proteIn id="BAC30614.1"
/proteIn id="BAC30614.1"
/db_xref="GI:26333793"
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAETKE
/translation="MSIVCSAEDSFRNLILFFRPRLKMYIQVEPVLDHLIFLSAERYVKPTLTDL
pspssetahdeclhlithloptlotlcggfpfvdhotlengshrdgn
esgvrellrrivokenwfstfldvlrqtgndalfqeltgggcpedntdlangshrdgp
esgvrellrrivokenwfstfldvlrqtgndalfqeltgggcpedntdlangshrdgp
aanecllpavdessleteawnvddilpeasctdssvttesdtslaegsvscpdeslgh
nsnmgrdsgtmgsdsdesviotkrvspepelqlrpyQmevaQpaldgkniiclptgs
gktrvavyitkdhldkkQasesgkvivlvvxvmlaeglfpkcfrkefnpylkkwyriigls
gdtqlkisfpevvksydviistaqilensllnlesgdddgvQlsdpsliildechhtn
keavynnimrrylkQklrnndlkkonkpaiplpQilgltaspGvGaakkQseaekHil
keavynnimrrylkQklrnndlkkonkpaiplpQilgltaspGvGaakkQseaekHil
                                                                                                                                                                        KEAVYNNIMRRYLKQKLRNNDLKKQNKPAIPLPQILGLTASPGVGAAKKQSEAEKHIL
NICANLDAFTIKTVKENLGQLKHQIKEPCKKFVIADDTRENPFKEKLLEIMASIQTYC
QKSPMSDFGTQHYEQWAIQMEKKAAKDGNRKDRVCAEHLRKYNEALQINDTIRMIDAY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="unnamed protein product; putative similar to MELANOMA DIFFERENTIATION ASSO [Homo sapiens] (SPTR|Q9H3G6, evidence: F67.6%length, match=2079)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Mus musculus"
/mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'db_xref="taxon:10090"
'clone="A430105A06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           db_xref="FANTOM_DB:A430105A06"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            e Genome
arch Group in Riken
ratory in RIKEN.
en contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mouse cDNA library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OCIATED PROTEIN-5 PASTY, 75.6%ID,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         akaku-Akahira,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           izume,W.
                                                                                                                                                CKSLKLDETDEFLMNLFFD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 raki,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Murata, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kouda, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hirozane, T.,
Kasukawa, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sakazume, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Carninci, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ohsato, N.,
```

중 유

340 ValTyrIleAlaLysAspHisLeuAspLysLysLysAysAlaSerGluProGlyLysVal 35	CCGAGCCAGAACTGCAGCTCAGGCCTTACCAAATGGAAGTGGCCCAACCAGC 1yLysAsnIleIleIleCysLeuProThrGlySerGlyLysThrArgValAl	81 GlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaArg 2	CTTCTTGTACAĠATTCĠTCTĠTGACCACAĠAATCAĠAC alSerCysLeuAspGluSerLeuGlyHisAsnSerAsn 	GlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGl 	TIGGATGTTCTGCGCAAACTGGAAATGATGCACTATTCCAAGAACTAACAGG CygSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGl 	la 1 CC 8 er 2	HGCCCACTTIGGIGGACAXACTICIGALLAACGAIGICLIGGACACLIGCLIGGAG :::	1 ABPLEUPIOSEIPioseipios	81 GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr 1 81 GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr 1 81 GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr 1 81 GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr 1 82 GAGGCCCTAGAGCACAGTGGCAATCCCCTAGCCGCGCGCG	1 GluValLysGluGinileGinArgThrValAlaThrSerGlyAshMetGinAlaValGlu 60	3 ATGTCGATTGTCTGCTGCAGAGGACAGCTTCAGGAATCTCATCTTATTCTTCAGGCCC 3 3 ATGTCGATTGTCTGTTCTGCAGAGGACAGCTTCAGGAATCTCATCTTATTCTTCAGGCCC 3 1 ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla 4 :::
RESULT 5 BQ233683 LOCUS BQ233683 BQ233683 TOCUS DEFINITION AGENCOURT 7258428 NIH MGC 71 Homo sapiens cDNA clone IMAGE:5786526 5', mRNA sequence. ACCESSION BQ233683 VERSION BQ233683.1 GI:20415083	80 PhePheGluAsn 683 ::: 20 TTCTTTGATAAC 2331	Qy 640 ValileGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGluAspGluAsp 659 ::: :: ::: :::: :::: :::: ::: ::::: ::::: ::::: ::::: ::::: ::::::	620 IleAspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPheAla 6 	OY 580 GLTTPAIBLIEGINMECGIULYBLYBAIBAIBLYBLYBGIYASHAIGHTGLYBLYBGIYASHAIGHTGLYBLYBGIYASHAIGHTGLYBLYBGIYASHAIGHTGLYBLYBGIYASHAIGHTGLYBLYBGIYASHAIGHTGLYBLYBGIYAGIA 579 [560 ArgIleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyThrGlnProTyrGlu 5		Qy 500 AlaLysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPheThrIleLys 519 ::::: ::: :::	Db 1663 CGATATTTGAAGCAGAÁGCTGAGAÁCAÁTGACCTCAAGAÁACAÁACAAÁCÁAGCCÁTT 1722 Qy 480 ProLeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThrLy8Gln 499	Qy 440 IleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAsnIleMetArg 459	Db 1483 TTTCCAGAAAGTTGTCAAAATCTTACGATGTTATTATCAGCACTGCTCAAAATCCTTGAAAAC 1542 Qy 420 SerLeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeu 439	Ob 1363 ATCGTTCTTGTCAATAAGGTAATGTTAGCAGAACAACTTTTCCGAAAAGAGTTCAACCCA 1422 Oy 380 PheLeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSer 399 :::

Ś

В

Ş

g

Ş

음 성

ફ

밁

g

중 유

멍

ঠ

5

5

र्

ঠ

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                               밁
                                                                                                                                          ঠ
                                                                                                                                                                            밁
                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                     $
                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                     ঠ
                                                        8
                                                                                  र्
                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLAM12875 row: g column: 07
High quality sequence stop: 721.
Location/Qualifiers
                                                                                                                                                609
                                                                                                                                                                               182
                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                                            549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores:
                                                                                                                                                                                                                                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae; Homo.

1 (bases 1 to 1013)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                       GlyAspAspGluTyrCysAspGlyAspGluAspGluAspAspLeuLysLysProLeuLys
                                                                         PheTyrAsnGluGluLysAspLysLysPheAlaValIleGluAspAspSerAspGluGly
                                                                                                                                   GluAlaLeuGlnIleAsnAspThrIleArgMetIleAspAlaTyrThrHisLeuGluThr
                                                                                                                                                                              GCTGCAAAAGAACGAAATCGCAAAGAACGTGTTTGTGCAGAACATTTGAGGAAGTACAAT
                                                                                                                     GÁGGCCCTACÁAATTAATGACACÁATTCGAATGATAGATGCGTATACTCATCTTGAAACCT
                                                                                                                                                                                           AlaAlaLysLysGlyAsnArgLysGluArgValCysAlaGluHisLeuArgLysTyrAsn
                                                                                                                                                                                                                                       CCAATG
                                                                                                                                                                                                                                                       ProMetSerAspPheGlyThrGlnProTyrGluGlnTrpAlaIleGlnMetGluLysLys
  GGTGATGATGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                 (1-1025) x BQ233683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="IMAGE:5786526"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/clone_lib="NIH_MGC_71"
/clone_lib="NIH_MGC_71"
/site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Site_2: SalI; Cloned unidirectionally.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . .1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                           3.88e-160
1597.00
95.6%
94.2%
30.1%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                  (1-1013)
                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                1013
322
5
9
8
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         þe
                             668
                                                                                                                    301
                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                   588
                                                                                                                                                                                                                                                                                                                                                                                      548
                                                          361
                                                                                      648
                                                                                                                                                628
                                                                                                                                                                               241
                                                                                                                                                                                                         809
                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                           568
                                                                                                                                                                                                                                                                                                                                                         61
```

```
RESULT 6
BQ960157
LOCUS
DEFINITION
                                                                                                                                                     JOURNAL COMMENT
                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       음 중
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
    FEATURES
                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                    1008
                                                                                                                     M Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Ver
Mammalia; Eutheria; Euarchontoglires; Prima
Hominidae; Homo.
1 (bases 1 to 870)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Ge
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       422
                                                                                                                                                                                                                                                                                                                                                                                                                                             867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   847
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   669
                                                                                                                                                                                                                                                                                          BQ960157.1
EST.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM14005 row: o column: 17
High quality sequence stop: 738.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                  5', mRNA sequence
BQ960157
                                                                                                                                                                                                                                                                                                                                            BQ960157
AGENCOURT_8949486 NIH_MGC_71
                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTCAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                             GluGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCACAGTGGCAGAAGAAGTCTGGATATTAAAGAATGTAACATTGTTATCCGTTATGGT 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ValLysAlaHisHisLeuIleGlyAlaGlyHisSerSerGluPheLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MetGluGlnTyrThrArgThrGluGluSerAlaArgGlyIleIleP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ArgLeuAlaGluAsnProGluTyrGluAsnGluLysLeuThrLysLeuArgAsnThrIle 708
                                                                                                                                                                                                                                                                                                                                                                                                                     GAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AsnAspPheArgGluLysMetMetTyrLysAlaIleHisCysValG
|||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATGAACAAAAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGAGTGCATATGCGCTTTCCCCAGTGGATTACTGAAAAATGAAAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GlnSerAlaTyrAlaLeuSerGlnTrpIleThrGluAsnGluLysP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuAspGluThrAspArgPheLeuMetThrLeuPhePheGluAsnA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AATGATTTCCGAGA-AAGATGATGTATAAG----CTATACATGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCTACGTCCTGGTTGCTCACGTGGGTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ThrTyrValLeuValAlaHisSerGlySerGlyValIleGluHisG
||||||||||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCGTCAC-AATGAAATAGCCATGGTCCAGGCCCGTGGTCGAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuValThrAsnGluIleAlaMetValGlnAlaArgGlyArgAlaAr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ThrThrValAlaGluGluGlyLeuAspIleLysGluCysAsnIleValIleArgTyrGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AsnGluGlnLysGluValIleSerLysPheArgThrGlyLysIleA
                                                                                                                                                                                                                                                                                                                                                                                                                                             868
                                                                                                                                                                                                                                                                                                        GI:22375635
                                                                                                                                                                                                                                                                           (human)
                                                                                                                                                                                                                                    Chordata; Craniata; Vertebra
Euarchontoglires; Primates;
                                                                                                                                                                                                                                                                                                                                                Homo
                                                                                                                                                                                                                                                                                                                                                               ďq
                                                                                                                                                                                                                                                                                                                                                sapiens cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -GAGTATCO
                                                                                                                                                                                 Gene
                                                                                                                                                                                 ၀
                                                                                                                                                                                                                                                                                                                                                ear EST 21-AUG-2002 clone IMAGE:6472264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AsnLysMetLeuLys
                                                                                                                                                                                llection (MGC)
                                                                                                                                                                                                                                      ta; Euteleostomi;
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCAAAATGAAACCG 1007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          lnAsnMetLysPro 866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       luThr-----Val 846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           heAlaGluValGly 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              heThrLysThrArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAACGTGAGACATT 951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCTGCTTATCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rgAlaAspGluSer 828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /sProMetThrGln 768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCCATGACACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCTGAAGTAGGA 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nLeuLeuIleAla 788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCTGATGAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGAAATACCATA 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         728
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    688
```

```
Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
               S
                                                                  S
                                                                                                망
                                                                                                                        Ś
                                                                                                                                                    밁
                                                                                                                                                                           8
                                                                                                                                                                                                         망
                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                           Д
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-515-363C-2 (1-1025) x BQ960157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                          482
                                                                                                                                                                                                                                   752
                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                        732
                                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                            712
                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                  692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     612
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluTyrCysAspGlyAspGluAspGluAspAspLeuLysLysProLeuLysLeuAspGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluGluLysAspLysLysPheAlaValIleGluAspAspSerAspGluGlyGlyAspAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlnIleAsnAspThrIleArgMetIleAspAlaTyrThrHisLeuGluThrPheTyrAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAGGAAATCGCAAAGAACGTGTTTGTGCAGAAAT-TTGAGGAAGTACAATGAGGCCCCTA
                                                                                              AlaGluGluGlyLeuAspIleLysGluCysAsnIleValIleArgTyrGlyLeuValThr
                                                                                                                                                                                                                                                                                                                                                                                      GluAsnProGluTyrGluAsnGluLysLeuThrLysLeuArgAsnThrIleMetGluGln
                                                                                                                                                                                                                                                                                                                                                                                                                                             ThrAspArgPheLeuMetThrLeuPhePheGluAsnAsnLysMetLeuLysArgLeuAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAGTATTGTGATGGTGATGAAGATGAGGATGATTTAAAGAAACCTTTGAAACTGGATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAAATTAATGACACAATTCGAATGATAGATGCGTATACTCATCTTGAAACTTTCTATAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LeuValAlaHisSer-GlySerGlyValIleGluHisGluThrValAsnAspPheArgGl
                                                          AsnGluIleAlaMetValGlnAlaArgGlyArgAlaArgAlaAspGluSerThrTyrVal
                                                                                                                                                                    LysGluValIleSerLysPheArgThrGlyLysIleAsnLeuLeuIleAlaThrThrVal
                                                                                                                                                                                                          CACCATCTGATTGGAGCTGGACACAGCAGTGAGTTCAAACCCATGACACAGAATGAACAA
                                                                                                                                                                                                                         HisHisLeuIleGlyAlaGlyHisSerSerGluPheLysProMetThrGlnAsnGluGln
                                                                                                                                                                                                                                                              TATGCGCTTTCCCAGTGGATTACTGAAAATGAAAAATTTGCTGAAGTAGGAGTCAAAGCC
                                                                                                                                                                                                                                                                            TyrAlaLeuSerGlnTrpIleThrGluAsnGluLysPheAlaGluValGlyValLysAla
                                                                                                                                                                                                                                                                                                                                    TyrThrArgThrGluGluSerAlaArgGlyIleIlePheThrLysThrArgGlnSerAla
                                                                                                                                                                                                                                                                                                                                                                       GAAAACCCAGAATATGAAAATGAAAAAGCTGACCAAATTAAGAAATACCATAATGGAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                            GAAGAGAAAGATAAGAAGTTTGCAGTCATAGAAGATGATAGTGATGAGGGTGGTGATGAT
                                                                                                                                                      AAAGAAGTCATTAGTAAATTTCGCACTGGAAAAATAAATCTGCTTATCGCTACCACAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6472264"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/note="Organ: uterus; Vector: pCMV-SPORT6; Site_Site_2: Sall; Cloned unidirectionally. Primer: Average insert size 2.1 kb. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.7e-136
1376.00
97.9%
97.6%
25.9%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .870
                                                                                                                                                                                                                                                                                                                   CTGAGGAATCAGCACGAGGAATAATCTTTACAAAAACACGACAGAGTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-870)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 870
279
1
2
5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   e_1: NotI;
: Oligo dT.
                                                                    831
                                                                                                                                                                                791
                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                          751
                                                                                                                                                                                                                                                                                                                                              731
                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                   711
                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                        691
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            611
                851
                                                                                                  661
                                                                                                                            811
                                                                                                                                                       601
                                                                                                                                                                                                                                     771
                                                                                                                                                                                                                                                                                                                    421
                                            721
```

```
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 7
CR857114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONSRTM
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission

Submitted (12-NOV-2004) MIPS, Ingolstaedter Landstr.1, D-85764

Neuherberg, GERMANY

Clone from S. Wiemann, Molecular Genome Analysis, German Cancer

Research Center (DKFZ); Email s.wiemann@dkfz-heidelberg.de;

sequenced by Qiagen (Hilden/Germany) within the cDNA sequencing

consortium of the German Genome Project.

This clone (DKFZp46900632) is available at the RZPD Deutsches

Ressourcenzentrum fuer Genomforschung GmbH in Berlin, Germany.

Please contact RZPD for ordering:

http://www.rzpd.de/cgi-bin/products/cl.cgi?CloneID=DKFZp4690063

Further information about the clone and the sequencing project

available at http://mips.gsf.de/projects/cdna/.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pongo pygmaeus (CR857114 CR857114.1 GI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pongo pygmaeus (orangutan)
Pongo pygmaeus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrat
Mammalia; Eutheria; Euarchontoglires; Primates; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bahr, A., Lauber, J., Mewes, H.W., Fobo, G., Han, M. and Wiemann, S. The German cDNA Consortium Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hominidae; Pongo.
1 (bases 1 to 2530)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CR857114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                uLysMetMetTyrLysAlaIleHisCysValGlnAsnMet-LysProGluGluTyr--Al 870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                aHisLysIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGATGATGTATAAAGCTATACATTGTGTTCAAAATATGAAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGTTGCTCACAGTGGGTTCAGGAGTTATCGAACGTGAGACAGTT
                                                             /tissue_type="kidney"
/clone_lib="469 (synonym: pkid1).
DH10B; sites SfilA + SfilB"
/dev_stage="adult"
/note="hypothetical protein (Homo
                 NVVVRYGLLTNEISMVQARGRARADQSVYSFVATEGSRELKRELINEALETLMEQAVAAQKMDQAEYQAKIRDLQQAALTKRAAQAAQRENQRRQFPVEHVQLLCINCMVAVGHGSDLRKVEGTHHVNVNPSFSIYYNVSRDPVVINKVFKDWKPGGVISCRNCGEVWGLQMIYKSVKLPALKVRSMLLETPQGRIQAKKWSRVPFSVPDFDFLQHCAQNLSDLSLD"
                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Pongo pygmaeus"
/mol_type="mRNA"
/db_xref="taxon:9600"
/clone="DKFzp46900632"
                                                                                                                                                                                                                                                                                                            /gene="DKFZp46900632"
|21. .2157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2530 bp mRNA mRNA; cDNA DKFZp46900632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (orangutan)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Weil, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Amid, C
                                                                                                                                                                                                                                                                                                                                                              sapiens)"
                                                                                                                                                                                                                                                                                                                                                                                                                  Vecto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequencing project is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RZPD Deutsches
Berlin, Germany.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDNA sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                           r pSport1_Sfi; host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID=DKFZp46900632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               str.1, D-85764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          r HTC 12-NOV-2004 one DKFZp46900632).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AATGATTTCCGAGA 781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAGGAGTATGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               German Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Osanger, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   841
```

Alignment

Qy 566 GlnMetSerProMetSerAspPheGlyThrGlnProTyrGluGlnTrpAlaIleGln 584 ::: :::		nGlyGluAspAlaGlyV :::GAGGAGGAGCACT sHisThrAsnLysGluA sHisThrAsnLysGluA CCACACGCACAAGGACA CCACACGCACAAGGACA uLysAsnAsnArgLeuL ::: ::: CCAGAGGGCACAG yLeuThrAlaSerProG	CCTAGAGACTGTGGATGGAGGCAAGGTGGTTGTATTGGTCAAC LLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPheLeuLysLysTrp	ed. No.: 1.1e-134
Qy 925 LysMetHisHisValAsnMetThrProGluPheLysGluLeuTyrIleValArgGlu 943	Qy 865 LysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetGlnSerIleMetGluLys 884	Db 1420 CTTCTGGTGGCCACGAGTGTGGCGAGGAGGAGGGGGGTGGACATCCCACATTGCAATGTGGTG 1479 Qy 805 IleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArgGlyArgAlaArg 824 ::: :::	725 ThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThrGluAs ::: :::::: 1240 ACCCGCACCCGCAGAGGCGCACACTCCCTCCTGCTCTGGCTCCAGCAGCA 745 AlaGluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHisSerSe	Qy 625 HisLeuGluThrPheTyrAsnGluGluLysAspLysPheAlaValIleGluAspAsp 644 ::: ::: :::

```
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
BU189982
LOCUS
                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                 망
                                                               S
                                                                                                                        Ś
                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
               ঠ
                                                                                              멍
                                                                                                                                                                                                            US-09-515-363C-2 (1-1025) x BU189982
                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                            Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM13546 row: a column: 17
High quality sequence stop: 556.
Location/Qualifiers
1. .918
               420
                                                                    400
                                                                                                                          380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hominidae; Homo.

1 (bases 1 to 918)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
                                                                                                                                                       N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BU189982.1 GI:22703966
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          918
AGENCOURT 7950921 NIH MGC 71
5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TrpValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCys
                                                                                                            PheLeuLysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGTCCCGCGTGCCTTCTCCGTGCCTGACTTTGACTTCCTGCAGCATTGT
SerLeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeu
                                          ATAGTTCTTGTCAATAAGGTACTGCTAGTTGAACAGCTCTTCCGCAAGGAGTTCCAACCA
                                                                                                                                                                    IleValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnPro
                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6173848"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: Not Site_2: SalI; Cloned unidirectionally. Primer: Oligo Average insert size 2.1 kb. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Homo sapiens"
                                                                                                                                                                                                                                       3.64e-127
1289.50
95.1%
93.4%
24.3%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -atgctgctggagacccctcaggggcggatccaggccaaaaag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                           (1-918)
                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bр
Ното
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA linear I
sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gene
                                                                                                                                                                                                                                       918
269
5
6
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 04-SEP-2002
MAGE:6173848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2073
                                                                    419
                                            181
                                                                                                 121
                                                                                                                          399
                                                                                                                                                                                 379
                439
                                                                                                                                                        61
                                                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                      VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                        RESULT 9
BU902097
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                ACCESSION
Hominidae; Homo.

1 (bases 1 to 1174)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATCC

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium

DNA Sequencing by: Agencourt Bioscience Corporation

Clone distribution: MGC clone distribution informat

found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM14059 row: f column: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 362
                                                                                                                                                                                                                                                                                                                                                                                                842
                                                                                                                                                                                                                                                                                                                                                                                                                           636
                                                                                                                                                                                                                                                                                                                                                                                                                                                      782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                  BU902097 1174 bp

AGENCOURT 10127740 NIH MGC 71 H

5', mRNA sequence.

BU902097

BU902097.1 GI:24084010

EST.
                                                                                                                                                                                                            Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebral
Mammalia; Eutheria; Euarchontoglires; Primates; (
                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Val-CysAlaGluHisLeuArgLysTyrAsnGlu-AlaLeuGlnIle-AsnAspThrIle 617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlnTrpAla---IleGlnMetGluLysLysAlaAlaLysLysGlyAs
                                                                                                                                                                                                                                                                                                                                                                                                                     sLysPheAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ArgIleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyTl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCCAAAGCTGAAGAACACATTTTAAAAACTATGTGCCAATCTTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AlaLysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HisTyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAGTTTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCCATTGCAGATGCAACCAGAGAAGATCCATTTAAAGAGAAACTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AlaileAlaAspAlaThrArgGluAspProPheLysGluLysLeuLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProLeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyG:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCCCTCTTAAACTTGGAAAATGGAGAAGATGCTGGTGTTCAATTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCCTTC
                                                                                                                                                                                                                                                                                                                                                                                               851
                                                                                                                                                                                                                                                                                                                                                                                                                           639
                                                                                                                                                                                                                                                     (human)
                                                                                                                                                                                                                                                                                                                           bp
1 Homo
                                                                                                                                                                                                                                                                                                                           mRNA
sapiens
                                                                                                                                                                                                                                                                                                                           linear
                                                            tion (LLNL)
                                                                                                                                                                                                              ta; Euteleostomi; Catarrhini;
                                                                                                                                                                                                                                                                                                                            r EST 17-OCT-2002 clone IMAGE: 6502757
                                             rmation can be
                                                                                                                                                        llection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGGAAAAGGATTAG 841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8nArgLy8GluArg 598
|||||||||||||
aTCGCAAAGAACGT 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGACTTTTCCCTC 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \rGlnProTyrGlu 579
|||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTTACTATTAAA 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       uGluLygAgp-Ly 636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGAAATAATGACA 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              uGluIleMetThr 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGCAAGAAGTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           aPheThrIleLys 519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nLysProValIle 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAACCCTATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   оСувLувLувPhe 539
||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCCACGAAGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAAACCAGTGATT 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    yAlaThrLysGln 499
||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
```

541

۲,

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
밁
                   δ
                                           g
                                                              $
                                                                                   В
                                                                                                           S
                                                                                                                                   В
                                                                                                                                                      8
                                                                                                                                                                             g
                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                   멍
                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                              9
                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-515-363C-2 (1-1025) x BU902097
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred.
883
                                                                201
                                                                                        763
                                                                                                           181
                                                                                                                                    703
                                                                                                                                                        161
                                                                                                                                                                               643
                                                                                                                                                                                                     141
                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                    463
                                                                                                                                                                                                                                                                                                                                                                403
                                                                                                                                                                                                                                                                                                                                                                                                           343
                                                                                                                                                                                                                                                                                                                                                                                                                                                       283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                         18
                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High
                                                                                                                                                                               GluValLysGluGlnIleGlnArgThrValAlaThrSerGlyAsnMetGlnAlaValGlu
                                                                                                                                    GluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAla
                                                                                                                                                                                                                                                                                                                                                                            LeuLeuLeuSerThrLeuGluLysGlyValTrpHisLeuGlyTrpThrArgGluPheVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ArgValLysMetTyrIleGlnValGluProValLeuAspTyrLeuThrPheLeuProAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MetSerAsnGlyTyrSerThrAspGluAsnPheArgTyrLeuIleSerCysPheArgAla
GGAAAAGCAA
              -GluGluGlnLeuLeuSerThrThr-ValGlnProAsnLeuGlu-LysGluValTrpGly
                                                       AspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnVal
                                                                                         TTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGCTCT
                                                                                                  PheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySer
                                                                                                                                                                                                                            CTTCAGCCCACTCTGGTGGACAAGCTTCTAGTTAGAGACGTCTTGGATAAGTGCATGGAG
                                                                                                                                                                                                                                          LeuGlnProThrLeuValAspLysLeuLeuValArgAspValLeuAspLysCysMetGlu
                                                                                                                                                                                                                                                                                                                    GAGGCCCTCCGGAGAACCGGCAGCCCTCTGGCCCGCCCACATGAACCCCTGAGCTCACG
                                                                                                                                                                                                                                                                                                                                GluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnProGluLeuThr
                                                                                                                                                                                                                                                                                                                                                                                                            ATGTCGAATGGGTATTCCACAGACGAGAATTTCCGCTATCTCATCTCGTGCTTCAGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            qual
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:6502757"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/clone_lib="NIH_MGC_71"
/note="Organ: uterus; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT. Average insert size 2.1 kb. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ity sequence stop: 808.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.67e-123
1257.00
87.8%
84.7%
23.7%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-1174)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1174
271
10
19
20
                                                                                                                                                                                                     160
                                                                                                                                                                                                                                                  140
                                                                                                                                                                                                                                                                                               120
                      239
                                            882
                                                                  220
                                                                                        822
                                                                                                             200
                                                                                                                                     762
                                                                                                                                                          180
                                                                                                                                                                                702
                                                                                                                                                                                                                            642
                                                                                                                                                                                                                                                                        582
                                                                                                                                                                                                                                                                                                                    522
                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                462
                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                            402
                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                        342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    282
 942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
BM467983
LOCUS
 Ş
                      뭥
                                                        ঠ
                                                                                         US-09-515-363C-2
                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                               Score:
                                                                                                                                                                                                            Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                 Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                 No : :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     943
  816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGENCOURT 6437921 NIH MGC 71
5', mRNA sequence.
BM467983
                                                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
plate: LLAM12216 row: n column: 21
High quality sequence stop: 690.
Location/Qualifiers
1. 1115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hominidae; Homo.

1 (bases 1 to 1115)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian
Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebra
Mammalia; Eutheria; Euarchontoglires; Primates; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BM467983.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
{\tt MetValGlnAlaArgGlyArgAlaArgAlaAspGluSerThrTyrViscolution}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCACCAAAGAAATTCCCGGGAACAAAAATTCCAGCTTGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hrMetGlySerAspSerAspGluGluAsnValAlaAlaArgAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACAAGTTTGGGCAAAAAGGAAATGGCAACTGCTTAAAATGAAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MetGlu-AsnAsnSerSer-GluSerSerPheAlaAspSerSerVa
                                                 LeuAspIleLysGluCysAsnIleValIleArgTyrGlyLeuValT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACAACATGGGCAGGGATTTCCGGCCCCCGGGGCAAAGGATTTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             erAsnMetGlySerAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGGAAAAATAACTCATCAAAAATCATCTTTTGCAGATCCTTCTGAAGTTCCAGAACCAA 1002
                                                                                          (1-1025) \times BM467983
                                                                                                                                                                                                                                                     /mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:5532884"
/tissue_type="leiomyosarcoma"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_71"
/note="Organ: uterus; Vector: pCMV-SPORT Site_2: Sall; Cloned unidirectionally.
Average insert size 2.1 kb. "
                                                                                                                                                                                                                                                                                                                                                                                              organism="Homo
                                                                                                                                   2.39e-119
1218.00
99.1%
99.1%
22.9%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:18517025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (human)
                                                                                        (1-1115)
                                                                                                                                                                                                                                                                                                                                                                                              sapiens"
                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bp
Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sapiens cDNA
                                                                                                                                                                                                                                                                                         pcmv-spor
                                                                                                                     1115
228
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ၀
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ta; Euteleostomi; Catarrhini;
                              CCAATGAAATAGCC
                                               hrAsnGluIleAla 815
                                                                                                                                                                                                                                                                         T6; Site_1: NotI;
Primer: Oligo dT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          llection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            r EST 05-FEB-2002
lone IMAGE:5532884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAAAAAAAAAĠĠĠG 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lValSerGluSerA 259
   alLeuValAlaHis 835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LeuGlyHisAsnS 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----SerGlyT 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGGACATAACA 1062
                                60
```

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                 RESULT 11
BF337464
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: David N. Louis, M.D.

cDNA Library Preparation: Life Technologies, Inc.

cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can

found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAM9498 row: n column: 23

High quality sequence start: 5

High quality sequence stop: 695.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                          1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          916
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                             BF337464 1035 bp 602035195F1 NCI CGAP Brn64 Homo s 5', mRNA sequence.
BF337464 BF337464.1 GI:11283715
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19
                                                                                                                                                                         Hominidae; Homo.

1 (bases 1 to 1035)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                          Homo sapiens
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SerGlyGluAspIleHisValIleGluLysMetHisHisValAsnMetThrProGluPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SerGlySerGlyValIleGluHisGluThrValAsnAspPheArgGluLysMetMetTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                  SerGluCysCysLeuPheSerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GlyLeuAspLeuProCysLeuLysIleArgAsnPheValValValPheLysAsnAsnSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATAAATGGTGAAATCATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTGGGGAAGATATCCATGTAATTGAGAAAATGCATCACGTCAATATGACCCCAGAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TyrLysAsnAsnProSerLeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuGlnMetGlnSerIleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LysAlaIleHisCysValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGlu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTGGTTCAGGAGTTATCGAACGTGAGACAGTTAATGATTTCCGAGAGAAGATGATGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ThrLysLysGlnTyrLysLysTrpValGluLeuProIleThrPheProAsnLeuAspTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCTTAGATTTGCCTTGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAATTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGGAACTTTACATTGTAAGAGAAAACAAAACACTGCAAAAGAGTGTGCCGACTATCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LysGluLeuTyrIleValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TACAAGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTACAGATGCAAAGTATAATGGAAAAGAAAATGAAAACCAAGAGAAATATTGCCAAGCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata; Euteleo Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                 mRNA
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                          1025
                                                                                                                                                                                                                                                                                                                                                                                                                   690
                                                                                                                                                                                                                                                                                                                                                  linear
cDNA clone
                                                                                                                                                                                         Gene
                                                                                                                                                                                         Collection
                                                                                                                                                                                                                                                                                                                                                  EST 22-NOV-2000
IMAGE:4183126
                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                   can
                                                                                   þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       855
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     975
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           935
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               915
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                 δ
                                                                                  멍
                                                                                                       Ş
                                                                                                                                    밁
                                                                                                                                                       5
                                                                                                                                                                                         밁
                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                No ::
                                                                                                                                                                                                                                                                                                                                                                                                      246
                                                                                                                                                                                                                                                                                                                                                   306
                                                                                                                                                                                                                                                                                                                                                                              395
                                                                                                                                                                                                                                                                                                                                                                                                                                                         186
                                                                                                            495
                                                                                                                                                                                           486
                                                                                                                                                                                                                   455
                                                                                                                                                                                                                                              426
                                                                                                                                                                                                                                                                      435
                                                                                                                                                                                                                                                                                                 366
                                                                                                                                                                                                                                                                                                                          415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    თ
                                                                                  GlyAlaThrLy8GlnAlaLy8AlaGluGluHi8IleLeuLy8LeuCy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ASDLYSProValIleProLeuProGlnIleLeuGlyLeuThrAlaSe
                                                                                                                                                                                                                                                            SerAspPheSerLeuIleIleIleAspGluCysHisHisThrAsnLy
                                                                                                                                                                                                                                                                                                                GlnIleLeuGluAsnSerLeuLeuAsnLeuGluAsnGlyGluAspA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCCTGGAAAAGTTATAGTTCTTGTCAATAAGGTACTGCTAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GluProGlyLysValIleValLeuValAsnLysValLeuLeuValG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGTGGCAGCAAGAGCATCCCCGGAGCCAGAACTCCAGGCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AsnValAlaAlaArgAlaSerProGluProGluLeuGlnLeuArgPı
                                                                                                                                                                                                         AsnAsnIleMetArgHisTyrLeuMetGlnLysLeuLysAsnAsnAr
                                                                                                                                                                                                                                                                                                                                                    CAACTGAAAATATCATTTCCAGAAGTTGTCAAGTCCTGTGATATTA
                                                                                                                                                                                                                                                                                                                                                                     GlnLeuLy8IleSerPheProGluValValLy8SerCy8AspIleIl
                                                                                                                                                                                                                                                                                                                                                                                                       AAGGAGTTCCAACCATTTTTGAAGAAATGGTATCGTGTTATTGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                     LysGluPheGlnProPheLeuLysLysTrpTyrArgValIleGlyLe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAAACCAGAGTGGCTGTTTACATTGCCAAGGATCACTTAGACAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LysThrArgValAlaValTyrIleAlaLysAspHisLeuAspLysLy
                                                                                                                                                                                                                                                                                                  CAAATCCTTGAAAACTCCC
     ProCysLysLysPheAlaIleAlaAspAlaThrArgGluAspProPheLysGluLysLeu 554
                                                 AlaPheThrIleLysThrValLysGluAsnLeuAspGlnLeuLysAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4183126"
/tissue_type="glioblastoma with EGFR amplification"
/tab.host="DH10B (T1 phage-resistant)"
/clone_lib="NCI_CGAP_Brn64"
/clone_Torgan: brain; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.57 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.65e-118
1206.50
84.0%
79.5%
22.7%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF337464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-1035)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1035
264
15
44
12
                                                                                   GIGCCAAICT-GAI 664
                                                                                                                                                                                                                                                                                                                                                                      .eIleSerThrAla 414
||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OThrGlySerGly 334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTyrGlnMetGlu 314
                                CCAAATACAGAGG 724
                                                'sAlaAsnLeuAsp
                                                                                                                                                       rProGlyValGly 494
                                                                                                                                                                                                              GLeuLysLysGlu 474
                                                                                                                                                                                                                                                                                                                  aGlyValGlnLeu 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACAGCTCTTCCGC 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAAAAGCATCT 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACAGGGAGTGGA 125
                                                                                                                                                                                                                                               AGAAGCAGTGTAT 485
                                                                                                                                                                                                                                                                  sGluAlaValTyr 454
                                                                                                                                                                                                                                                                                                   TGGTGTTCAATTG
                                                                                                                                                                                                                                                                                                                                                    TATCAGTACAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          uGlnLeuPheArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             вLувLувAlaSer 354
|||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTACCAAATGGAA 65
                                                                                                                                                                                                                                                                                                                                                                                                         AAGTGGTGATACC
                                                                                                                                                                                          CTCAAGAAAGAA 545
                                                                                                                                                                                                                                                                                                                                                                                                                         SerGlyAspThr 394
                                                                                                                                                                                                                                                                                                                                                     365
                                                                                                             514
                                                                                                                                         605
                                                                                                                                                                                                                                                                                                   425
                                                                                                                                                                                                                                                                                                                                                                                                        305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   374
```

```
Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
DR422160
                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              555
                   Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hominidae; Homo.

1 (bases 1 to 690)

Wistow,G., Jaworski,C., Aryankalayi
Reid,T., Dushku,N. and Carper, D.
NEIBank analysis of Human pterygium
Unpublished (2005)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                  Email: graeme@helix.nih.gov
Plate: 08 row: g column: 05
Seq primer: Universal M13 Reverse.
                                                                                                                                                                                                                                                                                                                                                                                                                                             National Eye Institute
6/331, NIH, Bethesda, MD
Tel: 301 402 3452
Fax: 301 496 0078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Section on Molecular Structure and Function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DR422160
DR422160.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DR422160 690 bp mRNA nav08g05.yl Human pterygium. Unnormalized clone nav08g05 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Wistow G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nAspThrIleArgMetIleAspAlaTyrThrHis 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nArgLysGluArgValCysAlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuGluIleMetThrArgIleGlnThrTyrCysGlnMetSerPro-MetSerAspPheGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAACACAGCAAA-----GACAGAACGACACAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACGGTTGGGCGACCTTGGGGCGAACAAGGCGCGCACAAAGAGACACAGAAGAGGCGACACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAGCCACCCTATTAAA-----GGGGCCTCAACGGGGGAAAAGGGGGGCTAAGAAGCACAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YThrGlnProTyrGluGlnTrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ---TCTGAAATAGGCAGGGTTCCACTTTGGTGCAGT---AGTCCAGGTCGCA---TTGGG
                                                        /clone lib="Human pterygium. Unnormalized (nav)"
/clone lib="Human pterygium. Unnormalized (nav)"
/note="Organ: Eye; Vector: pCMVSport6; RNA was extracted
from 9 pooled human pterygia. A directionally cloned cDNA
library in the pCMVSPORT6 vector (Invitrogen) was
constructed at Bioserve Biotechnology (Laurel MD)
essentially following the protocols of the SuperScript
Plasmid System, full details of which are contained in the
manufacturer's Instruction manual
(http://www.lifetech.com/). First strand synthesis was
carried out using a Not I primer-adapter
[5'-pGACTAGTTCTAGATCGCGAGCGGCCGCCC(T)15-3']. cDNA was
cloned in Not I/Sal I sites. EST analysis was performed at
the NIH Intramural Sequencing Center (NISC). Analyzed data
available through http://neibank.nei.nih.gov."
                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="nav08g05"
                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                  /tissue_type="Pterygium"
/dev_stage="Adult"
/lab_host="EMDH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:68324176
    .06e-116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata; Euteleostomi; Euarchontoglires; Primates; Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Aryankalayil-John,M.,
Carper, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20892-2740,
    Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear E
(nav) Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rowsey, J.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 29-JUN-2005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cox, C.
                                                                          data
                                                                                                                                                                                                                          CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                830
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              574
                                                                                                                                                                 the
                                                                                          a
C
   REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                     ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                          RESULT 13
BF983236
LOCUS
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                               멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-515-363C-2
                                                                                                                                                                                              DEFINITION
Homo sapiens (human)

Homo sapiens
Eukaryota; Metazoa; Chordata; Cra
Mammalia; Eutheria; Euarchontogli
Hominidae; Homo.
1 (bases 1 to 729)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mational Institutes
                                                                                                                                                                                                                                                                     662
                                                                                                                                                                                                                                                                                                  783
                                                                                                                                                                                                                                                                                                                               602
                                                                                                                                                                                                                                                                                                                                                          763
                                                                                                                                                                                                                                                                                                                                                                                       542
                                                                                                                                                                                                                                                                                                                                                                                                                                                 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      563
                                                                                                                                  mRNA sequence.
BF983236
BF983236.1 GI:
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                         BF983236
602305873F1 NIH_MGC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                            PheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPk
                                                                                                                                                                                                                                                                    ATAAATCTGCTTATCGCTACCACAGTG
                                                                                                                                                                                                                                                                                   AsnAsnLysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIleAspAla 622
                                                                                                                                                                                                                                                                                                                                                                                                     LysPheAlaGluValGlyValLysAlaHisHisLeuIleGlyAlaG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                IlePheThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAATTAAGAAATACCATAATGGAGCAATATACTAGGACTGAGGAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACAATAAAATGTTGAAAAGGCTGGCTGAAAACCCCAGAATATGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuLysLysProLeuLysLeuAspGluThrAspArgPheLeuMetTl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GATGATAGTGATGAGGGTGGTGATGATGAGTATTGTGATGGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTCAAATGGAAAAAAAGCTGCAAAAGAAGGAAATCGCAAAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrTyrCysGlnMetSerProMetSerAspPheGlyThrGlnProT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGluGluS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTAAAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATACTCATCTTGAAACTTTCTATAATGAAGAGAAAGATAAGAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLysPi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATTTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IleGlnMetGluLysLysAlaAlaLysLysGlyAsnArgLysGluA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTTATTGTCCCTTTAGTCCAATGTCAGATTTTGGAACTCAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-1025) x DR422160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .GGAAGTACAATGAGGCCCTACAAATTAATGACACAATTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1186.00
99.1%
98.7%
22.3%
                                                                                                                                                   GI:12386048
                                                                                                                                                                                            88
                                                                        Chordata; Craniata; Vertebr
Euarchontoglires; Primates;
                                                                                                                                                                                              Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-690)
                                                                                                                                                                                             Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                  791
                                                                                                                                                                                                                                                                    688
                    Mammalian
                                                                                                                                                                                              mRNA linos cone
                                                                                           Vertebra
                     Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 226
0
0
                                                                                                                                                                                              linear EST 23-JAN-2001 one IMAGE:4397083 5',
                     ၀
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TyrGluGlnTrpAla
                                                                             catarrhini;
                    llection (MGC)
                                                                                                                                                                                                                                                                                                                               TTCGCACTGGAAAA 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTGCAGTCATAGAA 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                heAlaValIleGlu 642
||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rgValCysAlaGlu 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ### 3nGluLysLeuThr 702
                                                                                                                                                                                                                                                                                                                                                       րերգThrGlyLys 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 eThrGluAsnGlu 742
                                                                                                                                                                                                                                                                                                                                                                                                           yHisSerSerGlu 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTATTTTTGAA 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGATGAGGATGAT 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AATGATAGATGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCACGAGGAATA 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rAlaArgGlyIle 722
||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rLeuPhePheGlu 682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTTTGTGCAGAA 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       uAspGluAspAsp 662
|||||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTGAAAATGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment
Pred. No.:
                                                                                                                   밁
                                                                                                                                               5
                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                          뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-515-363C-2 (1-1025) x BF983236 (1-729)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10097 row: a column: 20
High quality sequence stop: 665.
Location/Qualifiers
                                                                                                                   361
                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                               421
                                                                                280
                                                                                                                                                      260
                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                      200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       سم
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGGAGGAACTGTTGACAATTGAAGACAGAAACCGGATTGCTGCTGCAGAAAACAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GluGluGluLeuLeuThrIleGluAspArgAsnArgIleAlaAlaAlaGluAsnAsnGly
                                                                                                                                                                                                                                                                                                                                                                                                                           AlaPheLeuAsnValLeuArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AsnGluSerGlyValArgGluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSer
                                                                  MetGlySerAspSerGlyThrMetGlySerAspSerAspGluGluAsnValAlaAlaArg
                                                                                                                                                                                                              MetGluAsnAsnSerSerGluSerSerPheAlaAspSerSerValValSerGluSerAsp
                                                                                                                                                                                                                                                                                     ValGluGluGlnLeuLeuSerThrThrValGlnProAsnLeuGluLysGluValTrpGly
                                                                                                                                                                                                                                                                                                                                                                                                          GCATTTCTGAATGTTCTTCGTCAAACAGGAAACAATGAACTTGTCCAAGAGTTAACAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AlaSerProGluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAla
                                                                                                                     ACAAGTTTGGCAGAAGGAAGTGTCAGCTGCTTAGATGAAAGTCTTGGACATAACAGCAAC
                                                                                                                                           ThrSerLeuAlaGluGlySerValSerCysLeuAspGluSerLeuGlyHisAsnSerAsn
                                                                                                                                                                                                                                                                                                                                                         SerAspCysSerGluSerAsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:4397083"
/tissue_type="duodenal adenocarcinoma, cell line"
/tissue_type="duodenal adenocarcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/clone_lib="NIH_MGC_88"
/note="Organ: small_intestine; Vector: pCMV-SPORT6;
Site_1: NotI; Site_2: SalI; Cloned unidirectionally;
oligo-dT primed. Average insert size 1.767 kb. Library
enriched for full-length clones and constructed by Life
Technologies. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                       4.44e-110
1129.00
98.4%
97.5%
21.3%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                  299
                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                             199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   179
                                               480
                                                                                                                     420
                                                                                                                                                         279
                                                                                                                                                                                          360
                                                                                                                                                                                                                               259
                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                   239
                                                                                                                                                                                                                                                                                                                                                                       219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
BY720783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                   JOURNAL
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                         CE 1 (bases 1 to 972)

RS Okazaki,Y., Furuno,M., Kasukawa,T., Adachi,J., Bono,H., Kondo,S.,

RKiyosawa,H., Yagi,K., Tomaru,Y., Hasegawa,Y., Nogami,A.,

Kiyosawa,H., Yagi,K., Tomaru,Y., Hasegawa,Y., Nogami,A.,

Schonbach,C., Gojobori,T., Baldarelli,R., Hill,D.P., Bult,C.,

Schonbach,C., Gojobori,T., Baldarelli,M., Kanapin,A., Matsuda,H.,

Batalov,S., Beisel,K.W., Blake,J.A., Bradt,D., Brusic,V.,

Chothia,C., Corbani,L.E., Cousins,S., Dalla,E., Dragani,T.A.,

Fletcher,C.F., Forrest,A., Frazer,K.S., Gaasterland,T.,

Gariboldi,M., Gissi,C., Godzik,A., Gough,J., Grimmond,S.,

Gustincich,S., Hirokawa,N., Jackson,I.J., Jarvis,E.D., Kanai,A.,

Kawaji,H., Kawasawa,Y., Kedzierski,R.M., King,B.L., Konagaya,A.,

Kurochkin,I.V., Lee,Y., Lenhard,B., Lyons,P.A., Maglott,D.R.,

Maltais,L., Marchionni,L., McKenzie,L., Miki,H., Nagashima,T.,

Numata,K., Okido,T., Pavan,W.J., Pertea,G., Pesole,G.,

Numata,K., Okido,T., Pavan,W.J., Pertea,G., Pesole,G.,

Sandelin,A., Schneider,C., Semple,C.A., Setou,M., Shimada,K.,

Sultana,R., Takenaka,Y., Taylor,M.S., Teasdale,R.D., Tomita,M.,

Verardo,R., Wagner,L., Wahlestedt,C., Wang,Y., Watanabe,Y.,

Wells,C., Wilming,L.G., Wynshaw-Boris,A., Yanagisawa,M., Yang,I.,

Yang,L., Yuan,Z., Zavolan,M., Zhu,Y., Zimmer,A., Carminci,P.,

Hayatsu,M., Hirozane-Kishikawa,T., Konno,H., Nakamura,M., Yang,I.,

Yang,L., Yuan,Z., Zavolan,M., Shixaki,K., Kawai,J., Alzawa,K.,

Narakawa,T., Fukuda,S., Hara,A., Hashizume,W., Imotani,K., Ishii,Y.,

Itoh,M., Kagawa,I., Miyazaki,A., Sakai,K., Sasaki,D., Shibata,K.,

Nanalysis of the mouse transcriptome based on functional annotation

of 60,770 full-length cDNs

BL 12466851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BY720783 RIK
BY720783 RIK
CDNA Clone 9:
BY720783
BY720783.1 (
EST.
Email: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Fukuda,S., Hashizume,W., Hayashida,K., Hirozane,T., Hori,F., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Kawai,J., Kojima,Y., Kondo,S., Konno,H., Koya,S., Miyazaki,A., Murata,M., Nakamura,M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrat Mammalia; Eutheria; Euarchontoglires; Glires; Rod Sciurognathi; Muroidea; Muridae; Murinae; Mus. 1 (bases 1 to 972)
                                                                                                                                Contact: Yoshihide Hayashizaki
Laboratory for Genome Exploration Research Group, R
Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RI
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa
Tel: 81-45-503-9222
Fax: 81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PheLeuLysLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ValTyrIleAlaLysAspHisLeuAspLysLysLysLysAlaSerG:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LeuGluGlyLysAsnIleIleIleCysLeuProThrGlySerGlyLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IleValLeuValAsnLysValLeuLeuValGluGlnLeuPheArgLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTTACATTGCCAAGGATCACTTAGACAG-AAGAAAAAAGCATCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTGGAAGGGAAGATATCATCATCTGCTC-CCTACAGGGAGTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATAGTTCTTGTGCATAAGGTACTGCTAGTTGAACAGCTCTTCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      972 bp mRNA
RIKEN full-length enriched, adult
ne 9130009C22 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:27133900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LysThrArgValAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     r EST 17-DEC-2002 cecum Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGAGTTCCCACCA 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;a; Euteleostomi;
lentia;
                                                                                                                                                                                                                   (RIKEN)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sGluPheGlnPro 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCCTGGAAAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                uProGlyLysVal
                                                                                                                                                                                                                                                                       RIKEN Genomic
                                                                                                                                                                                      230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     339
```

GlyGluAspIleHis ||||||:::|||||| GGAGAAAACATCCAT

921

360

420

||::::||||||||| AGGTGCAAAGTATC

300

901

CTATTAACCGTGTT

240

.aIleHisCysVal 861 ||||::: |||

ASNGlyGluIleIle |||||||||||| AATGGAGAGATTATC

GACTCTACATTGTA luLeuTyrIleVal 941

480

ysLysGlnTyrLys |||||||||| |agaaacagTacaag

660 1001 600

AGATTTGCCTTGT

AspLeuProCys

981 540 961

ATACTGCTTGTAT 720

uCysCysLeuPhe 1021

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                      US-09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                         Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                            No::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)

Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)

Computer-based methods for the mouse full-length cDNA encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN. Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                           Scores:
  822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
Computational Analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Saito, R., Sakazume, N
Sano, H., Sasaki, D., Sato, K., Shibata, K., Shiraki, T., Tagami, M.,
Takeda, Y., Waki, K., Watahiki, A., Muramatsu, M. and Hayashizaki, Y.
                                                                                                      GAAATAAATCTGCTTATCGCTACGACGGTGGCAGAGGAAGGCCCTGGATATCAAAGAGTGC
 ArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyValIle
                                                                                                                         LysIleAsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLysGluCys
                                                    AsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAlaArgGly
                                     <u>AATATTGTTATTCGTTATGGCCTTGTCACGAACGAGATAGCCATGGTCCAGGCCCGGGGT</u>
                                                                                                                                                                        (1-1025)
                                                                                                                                                                                                                                                                                                                                                                    mouse tissues.

visit our web site (http://genome.gsc.riken.go.jp)
details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /mol_type="mRNA"
/strain="C57BL/6J"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="cecum"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              clone="9130009C22"
|sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Mus musculus"
                                                                                                                                                                                                       3.97e-109
1122.00
92.6%
88.1%
21.1%
                                                                                                                                                                        ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ion/Qualifiers
                                                                                                                                                                        BY720783
                                                                                                                                                                        (1-972)
                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                       972
215
11
18
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sakazume, N.,
    841
                                    120
                                                                     821
                                                                                                                                        801
                                                                                                        60
                                                                                                                                                     REFERENCE
AUTHORS
TITLE
JOURNAL
PUBMED
REFERENCE
                  PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 15
AK018602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Snoo
                                                                     JOURNAL.
                                                                                                        TITLE
                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
3
Shibata,K.,
Konno,H., A
                                                                                                                                                                                                                                                                                                                                                            sequence.
AK018602
AK018602.1
                                                                 Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y. Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M. and I Normalization and subtraction of cap-trapper-sell prepare full-length cDNA libraries for rapid disception Res. 10 (10), 1617-1630 (2000)
                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebra
Mammalia; Eutheria; Euarchontoglires; Glires; Ro
Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                         HTC; CAP trapper.
Mus musculus (house mouse)
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                              AKO18602 1197 bp mRNA linear HTC 03-APR-2004 Mus musculus adult male cecum cDNA, RIKEN full-length enriched library, clone:9130009C22 product:similar to MELANOMA DIFFERENTIATION ASSOCIATED PROTEIN-5 [Homo sapiens], full insert
                                                                                                                                                                                      Carninci, P. and Hayashizaki, Y. High-efficiency full-length cDNA Meth. Enzymol. 303, 19-44 (1999)
                                                                                                                                                                        10349636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGAAAAGAAATGAAAGTCGAAAGAAGCATTGCAAAGCAATACAACGACAATCCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnProSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAACGGGAGATTGTTAATGATTTCCGAGAGAAGATGATGTATAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SerAspGluAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTAAAATAAGGAATTTTGTAGTCAATTTCAAAAATAACTCACCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTAATAACACTTCTCTGCAAAAATTGTAGCATGCTGGTCTGCTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAAAACATGAAACCAGAGGAGTATGCACATAAGATTTTGGAATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGCCAGAGCTGATGAAAGCACGTATGTCCTGGTCACCAGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCATTGAGAAGATGCATCATG
    Akiyama, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGCAAAAGAATTTGCTGATTATCAGACCA
     Aizawa, K.,
Nishi, K.,
     Nagaoka, S.,
Kitsunai, T.,
                                                                                                                                                                                                           cloning
```

멍 Ś

Ś

Sasa Tas

aki,N., Ca shiro,H.,

Carninci, P., ., Itoh, M.,

., Shibata,K., Hayashizaki,Y. lected cDNAs to scovery of new g

genes

ta; Euteleostomi;
dentia;

밁 S Query

Score: Pred

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Group Phase I & II Team.

Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs

AL Nature 420, 563-573 (2002)

E 6 (bases 1 to 1197)

RS Adachi, J., Aizawa, K., Akahira, S., Akimura, T., Arai, A., Aono, H., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Fukunishi, Y., Furuno, M., Hanagaki, T., Hara, A., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Izawa, M., Koya, S., Kurihara, C., Matsuyama, T., Miyazaki, A., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Okazaki, Y., Okido, T., Owa, C., Saito, H., Saito, R., Sakai, C., Sakai, K., Sano, H., Sasaki, D., Shibata, K., Shibata, Y., Shihaqawa, A., Shiraki, T., Sogabe, Y., Suzuki, H., Tagami, M., Tagawa, A., Takahashi, F., Tanaka, T., Tejima, Y., Toya, T., Yamamura, T., Yasunishi, A., Yoshida, K., Yoshina, Y., Toya, T., Yamamura, T., Yasunishi, A., Yoshida, K., Voshina, Y., Toya, T., Yamamura, T., Yasunishi, A., Yoshida, K., Direct Submission

Submitted (10-JUL-2000) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama, Institute; 1-7-22 Suchitro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan (E-mail:genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp, Tel:81-45-503-9222, Pax:81-45-503-9216)

Please Visit our web site (http://genome.gsc.riken.jp/) for further derivation.
                                                                                                                                                                                                                                                                                       Sumi,N., Ishii,Y., Nakamura,S., Hazama,M., Nishine,T., Harada,A., Yamamoto,R., Matsumoto,H., Sakaguchi,S., Ikegami,T., Kashiwagi,K., Fujiwake,S., Inoue,K., Togawa,Y., Izawa,M., Ohara,E., Watahiki,M., Yoneda,Y., Ishikawa,T., Ozawa,K., Tanaka,T., Matsuura,S., Kawai,J., Okazaki,Y., Muramatsu,M., Inoue,Y., Kira,A. and Hayashizaki,Y. RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FANTOM Consortium.

Functional annotation of a full-length mouse cDNA collection Nature 409, 685-690 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The FANTOM Consortium and the RIKEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The RIKEN Genome
/note="unnamed protein product; putative
similar to MELANOMA DIFFERENTIATION ASSOCIATED
                                                                                                                                /strain="C57BL/6J"
/db_xref="FANTOM_DB:9130009C22"
/db_xref="taxon:10090"
/clone="9130009C22"
                                                                                                                                                                                                                                                                        Location/Qualifiers
                                      /tissue type="cecum"
/clone Tib="RIKEN full-length enriched mouse
/dev_stage="adult"
<1. .737</pre>
                                                                                                                                                                                                               organism="Mus musculus"
/mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Exploration Research Group
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genome Exploration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Phase II Team
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                               ঠ
                                                                                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ફ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-515-363C-2 (1-1025) x AK018602 (1-1197)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            polyA_signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      polyA_site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                        483
                                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AsnIleVallleArgTyrGlyLeuValThrAsnGluIleAlaMetVa
                                                                                                                                                                                                                                                                ArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIleIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAAATAAATCTGCTTATCGCTACGACGGTGGCAGAGGAAGGCCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LysIleAsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAs
                                 LysTrpValGluLeuProIleThrPheProAsnLeuAspTyrSerG
                                                                                                         LeuLysIleArgAsnPheValValValPheLysAsnAsnSerThrL
                                                                                                                                                                                     CysLysCysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLe
                                                                                                                                                                                                                                         AGAGAAAACAAAGCACTGCAAAAGAAATTTGCTGATTATCAGACCA
                                                                                                                                                                                                                                                                                                                      GTCATTGAGAAGATGCATCATGTCAATATGACACCAGAATTCAAGGGACTCTACATTGTA
                                                                                                                                                                                                                                                                                                                                          VallleGluLysMetHisHisValAsnMetThrProGluPheLysG:
                                                                                                                                                                                                                                                                                                                                                                                                  TTAATAACACTTCTCTGCAAAAATTGTAGCATGCTGGTCTGCTCGGGAGAAAACATCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                   LeuIleThrPheLeuCysLysAsnCysSerValLeuAlaCysSerG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGAAAAGAAATGAAAGTCGAAAGAAGCATTGCAAAGCAATACAACGACAATCCATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAACGGGAGATTGTTAATGATTTCCGAGAGAAGATGATGTATAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGAGCCAGAGCTGATGAAAGCACGTATGTCCTGGTCACCAGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAANACATGAAACCAGAGGAGTATGCACATAAGATTTTGGAATTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [Homo sapiens] (SPTR|Q9H3G6, evidence: FASTY, 75.6%ID, 67.6%length, match=2079)"
/codon_start=3
/proteIn_id="BAB31303.2"
/db_xref="GI:26384184"
/translation="EINLLIATTVAEEGLDIKECNIVIRYGLVTNEIAMVQARGRARA
DESTYVLVTSSGSGVTEREIVNDFREKMMYKAINRVQNMKPEEYAHKILELQVQSILE
KKMKVERSIAKQYNDNPSLITLLCKNCSMLVCSGENIHVIEKMHVNMTPEFKGLYIV
RENKALQKKFADYQTNGEIICKCGQAWGTMMVHKGLDLPCLKIRNFVVNFKNNSPKKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YKKWVELPIRFPDLDYSEYCLYSDBD"
1180. .1185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'note="putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5.52e-109
1122.00
92.6%
88.1%
21.1%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1197
215
11
18
0
                                                                                                                                                                                                                                                                                                                                             luLeuTyrIleVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lnMetGlnSerIle
||:::|||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ysAsnAsnProSer
:::||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3pI1eLysGluCys
      ATACTGCTTGTAT
                                         uCysCysLeuPhe 1021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             alleH1sCysVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    yserGlyValile
                                                                             GAAACAGTACAAG
                                                                                                                    eLysGlnTyrLys
                                                                                                                                                                                                                                                                                                                                                                                                                     yGluAspIleHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTAACCGTGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCAGGAGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     lGlnAlaArgGly
                                                                                                                                                                                                                                        TGGAGAGATTATC
                                                                                                                                                                                         uAspLeuProCys
|||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            841
                                                                                                                                                                                                                                                                                 961
                                                                                                                                                                                                                                                                                                                                                            941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  881
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        821
                                                                                                                          1001
                                                                                                                                                                                                                                                                                                                      482
                                                                                                                                                                                                                                                                                                                                                                                                  422
                                                                                                                                                                                                                                                                                                                                                                                                                                         921
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  122
                                                                                                                                                                                                   981
                                                                                                                                                                                                                                           542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                  662
                                                                                                                                                                602
```

Qy 1022 SerAspGluAsp 1025 ||||||||| |Db 723 AGTGATGAAGAT 734

Search completed: March 13, 2006, 21:29:16 Job time : 9431 secs

This Page Blank (Uspho)

```
Command line parameters:

-MODEL=frame+_p2n.model -DEV=xlp
-Q=/abss/ABSSWEB_spool/US09515363/runat_10032006_181133_8032/app_query.fasta_1
-DB=Issued_Patents_NA -QFMT=fastap_-SUFFIX=rni -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS=bits -START=1 -END=-1 -MATRIX=blosum62 -TRANS=human40.cdi
-LIST=45 -DOCALIGN=200 -THR_SCORE=pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE=LOCAL -OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000
-HOST=abss02p -USER=US09515363_@CGN_1_1_512_@runat_10032006_181133_8032
-NCPU=6 -ICPU=3 -NO_MMAP -NEG_SCORES=0 -WAIT -DSPBLOCK=100 -LONGLOG
-DEV_TIMEOUT=120 -WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6
-FGAPEXT=7 -YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                          Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   on:
    987654324
                                                                                                                                                                                                                                       Pred. No. score grea and is der
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
BG
  2072
1352
498
472
472
476
392.5
392.5
395.5
                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seq
                                                                                                                                                                                                                                       greater than
s derived by a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                Issued_Patents_NA:*
1: /cgn2_6/ptodata/1/ina/1_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/H_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
7: /cgn2_6/ptodata/1/ina/PP_COMB.seq:*
9: /cgn2_6/ptodata/1/ina/RE_COMB.seq:*
9: /cgn2_6/ptodata/1/ina/RE_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length: 0 length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xgapop 10.0
Ygapop 10.0
Fgapop 6.0
Delop 6.0
                                                                                                                                                           Query
Match
                                                                                                                                                                                                                                    is the number of results predicted by chance to have ater than or equal to the score of the result being purived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-515-363C-2
5311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                March 12, 2006, 04:58:35; Search time 688 Seconds (without alignments) 2648.257 Million cell up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1303057 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BLOSUM62
   39.0
25.5
9.4
8.9
7.6
7.4
6.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maximum
Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MSNGYSTDENFRYLISCFRA.....LPITFPNLDYSECCLFSDED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Copyright
  1392
2590
458
301
301
301
6184
1664976
1664976
                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version (c) 1993 - 2006
                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Xgapext
Ygapext
Fgapext
Delext
                                               888780828 residues
                  யய
US-09-023-655-48
US-09-799-451-771
US-09-907-907A-32
US-08-143-576-7
US-09-221-268D-12
US-09-590-968B-1
3 US-09-590-968B-1
3 US-08-916-421B-1
US-09-692-570-1
US-09-853-768-3
                                                                                                                                                              IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              summaries
                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.1.7
Biocceleration
             Sequence 48, Appl
Sequence 771, App
Sequence 32, Appl
Sequence 7, Appli
Sequence 12, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cell updates/sec
                                                                                                                                                                                                                                                       printed,
```

87. 87. 87.	187.5 187.5	87. 87.	87.	88.	90.	91.	93. 91.	93.	94.	95.	•	99.	٠.	11.	21	7:	27.	83.	œ	œ	•	89.
											•		•	٠			•		•	•	٠	•
042	6921	9 9 2	92	986	915	Jω	859 013	98	78	400	98	98	77	50	85	25	oν	35	43	0	99	51
ա ա ա	աաև	υω	ယယ	ωωκ	LU L	9	N	ω	N (w w	δ	Nω	ω	ω	w	w t	J K	w	w	Ų	ω	w
707	-09-456-396A-1 -09-476-496A-1 -09-630-940B-1	-09-606-421B-11 -09-221-107-117	-09-480-884A-	8-685-5/6-5 9-976-594-29 9-643-597-11	-09-949-016-	CT-US95-16216-2	9-949-016-55 8-353-700-2	-09-107-532A-23	-08-328-254-5	09-949-016-16 09-949-016-63	T-US93-11310-12	9-949-0 8-139-9	-09-166-350-27	-09-620-312D-	-09-853-768-10	-09-595-684	8-143-5/6-6	-10-104-047-	-09-408-020-2	-09-408-02	9-408-020-	-020-
equence 11 equence 28 equence 28	quence 11 quence 11	equence 11 equence 11	equence 11 equence 11	equence 29 equence 29 equence 11	equence 12	equence 2,	equence 35e	equence 23,	equence 5,	equence 1 equence 6	equence 12,	equence 12,	equence 27, App	equence 13	equence 10	equence 30	equence o,	equence 16	equence 2,	equence 33	equence 1,	equence 65

ALIGNMENTS

```
US-09-023-65-48
US-09-023-65-48
; Sequence 48, Application US/09023655
; Patent No. 6607879
; GENERAL INFORMATION:
    APPLICANT: Cocks, Benjamin G.
    APPLICANT: Susan G. Stuart
    APPLICANT: Susan G. Stuart
    APPLICANT: Susan G. Stuart
    APPLICANT: Susan G. Stuart
    TITLE OF INVENTION: EXPRESSION
    NUMBER OF SEQUENCES: 1508
    CORRESPONDENCE ADDRESS:
    ADDRESSES: INCYTE PHARMACEUTICALS, INC.
    STREET: 3174 PORTER DRIVE
    CITY: PALO ALTO
    STATE: CALIFORNIA
    COUNTRY: USA
    ZIP: 94304
    COMPUTER READABLE FORM:
    MEDIUM TYPE: TIMP C compatible
    OPERATING SYSTEM: PC-DOS/WS-DOS
    SOFTWARE: Word Perfect 6.1 for Windows/MS-DOS 6.2
    CURRENT APPLICATION NUMBER: US/09/023,655
    FILING DATE: HEREWITH
    CLASSIFICATION:
    APPLICATION NUMBER:
    FILING DATE: HEREWITH
    CLASSIFICATION:
    APPLICATION:
    APPLICATION:
    APPLICATION:
    ATTORNEY/AGENT INFORMATION:
    NAME: Zeller, Karen J.
```

```
REGISTRATION NUMBER: 37,071
REFERENCE/DOCKET NUMBER: PA-01
FILECOMMUNICATION INFORMATION:
FILEPHONE: (650) 855-0555
FILEFAX: (650) 845-4166
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
LENGTH: 1392 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: HMC1NOT01
CLONE: 004700
US-09-023-655-48
                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
Query Match:
DB:
             S
                              Вp
                                              á
                                                                밁
                                                                            8
                                                                                                  밁
                                                                                                                ঠ
                                                                                                                                                र्
                                                                                                                                                                   밁
                                                                                                                                                                                   ş
                                                                                                                                                                                                    멍
                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                      ş
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                          US-09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment
                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scores:
                                                                                                                                                                                                                                      243
                                               804
                                                                543
                                                                                784
                                                                                                  483
                                                                                                                                   423
                                                                                                                                                  744
                                                                                                                                                                   363
                                                                                                                                                                                     724
                                                                                                                                                                                                     303
                                                                                                                                                                                                                      704
                                                                                                                                                                                                                                                        684
                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                       664
                                                                                                                                                                                                                                                                                                        123
                                                                                                                                                                                                                                                                                                                         644
                                                                                                                                                                                                                                                                                                                                                        624
                                                                                                                 764
                                                                                                                                                                                                                                                                                                                                          63
                                                                                                                                                                                                                                                                                                                                                                           w
                                                                                                                                                                                                                                                                                                                                         LysLysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhePheGluAsn
                               AATCTGCTTATCGCTACCACAGTGGCAGAAGAAGGTCTGGATATTAAAGAATGTAACATT
                                                                          AsnLeuLeuIleAlaThrThrValAlaGluGluGlyLeuAspIleLysGluCysAsnIle
                                                                                                 LysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArgThrGlyLysIle
                                                                                                                                            PheAlaGluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHisSerSerGluPhe
                                                                                                                                                                            PheThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThrGluAsnGluLys
                                                                                                                                                                                                                                                                       AAGAAACCTTTGAAACTGGATGAAACAGATAGATTTCTCATGACTTTATTTTTTGAAAAC
                                                                                                                                                                                                                                                                                                         AspSerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAspGluAspAspLeu
AGAGCTGATGAGAGCACCTACGTCCTGGTTGCTCACAGTGGTTCAGGAGTTATCGAACGT
        ArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGlyValIleGluHis
                                                                                                                                                                    TTTACAAAAACACGACAGAGTGCATATGCGCTTTCCCCAGTGGATTACTGAAAATGAAAAA
                                                                                                                                                                                                                                                                                                                                                                                                           (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                   2.35e-219
2072.00
94.8%
94.8%
39.0%
                                                                                                                                                                                                                                                                                                                                                                                                           x US-09-023-655-48
                                                                                                                                  CAAAGCCCACCATCTGATTGGAGCTGGACACAGCAGTGAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PA-0001
                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SD
                                                                                                                                                                                                                                                                                                                                                                                                           (1-1392)
                                                                                                                                                                                                                                                                                                                                                                                                                           400
22
0
                                                                                                                                                                                      743
                                                                                                                                                                                                                      723
                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                        703
                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                         683
                                                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                            623
               843
                                 662
                                                 823
                                                                  602
                                                                                 803
                                                                                                   542
                                                                                                                   783
                                                                                                                                   482
                                                                                                                                                    763
                                                                                                                                                                     422
                                                                                                                                                                                                      362
                                                                                                                                                                                                                                                                                                                          663
                                                                                                                                                                                                                                                                                                                                                          643
                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                        RESULT 2
US-09-799-451-771
                                                                                                                                                                                                                                                                                 뭐
                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                         APPLICANT:
                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                    1083
                                                                                                                                                                                                                                                                                                                                                                                                                     1023
                                                                                                                                                                                                                                                                                                                                   1004
                                                                                                                                                                                                                                                                                                                                                   1143
                                                                                                                                                                                                                                                                                  1263
                                                                                                                                                                                                                                                                                                                                                                   984
                                                                                                                                                                                                                                                                                                                                                                                                    964
                                                                                                                                                                                                                                                                                                                                                                                                                                     944
                                                                                                                                                                                                                                                                                                                                                                                                                                                      963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           864
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           844
```

```
APPLICANT: Wang, Zhiwei
APPLICANT: Wang, Dunrui
APPLICANT: Yang, Yonghong
APPLICANT: Wehrman, Tom
APPLICANT: Ghosh, Reena
APPLICANT: Drmanac, Radoje T.
TITLE OF INVENTION: No. 6783969el Nuclei
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 803
CURRENT APPLICATION NUMBER: US/09/799,45
CURRENT FILING DATE: 2001-03-05
NUMBER OF SEQ ID NOS: 948
SOFTWARE: pt_FL_genes Version 2.0
SEQ ID NO 771
LENGTH: 2590
                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 771, Application US/09799451
Patent No. 6783969
GENERAL INFORMATION:
APPLICANT: Tang, Y. Tom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GluAsp
                                                                                                                                                                                                                                                                                                                                                                     Zhou, Fing
Goodrich, Ryle
                                                                                                                                                                                                                                       Ren, Feiyan
Zhang, Jie
Xue, Aidong J.
Zhao, Qing A.
Wang, Jian-Rui
Ma, Yunging
Yamazaki, Victoria
Chen, Rui-hong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GluLysMetHisHisValAsnMetThrProGluPheLysGluLeuT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGAAACCAGAGGAGTATGCTCATAAGATTTTTGGAATTACAGATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGACAGTTAATGATTTCCGAGAGAAGATGATGTATAAAGCTATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GluThrvalAsnAspPheArgGluLysMetMetTyrLysAlaIleH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ValGluLeuProIleThrPheProAsnLeuAspTyrSerGluCysCy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAGAAAATGCATCACGTCAATATGACCCCAGAATTCAAGGAACTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ThrPheLeuCysLysAsnCysSerValLeuAlaCysSerGlyGluAt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGAAAATGAAAACCAAGAGAAATATTGCCAAGCATTACAAGAATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTAGAATTACCTATCACATTTCCCAATCTTGACTATTCAGAATGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTGGCCAGGCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATT
                                                                                                                                                                                                                                                                                                                                                                                 Ping
'h, Ryle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTGGTTTTCAAAAATAATTCAACAAAGAAACi
                                                                                                                                    Nucleic
                                                                                                                                    Acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCTGGGGAAG.
                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              isCysValGlnAsn 863
|||||||||||||
ATTGTGTTCAAAAT 782
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAATCATCTGCAAA 1082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       luIleIleCysLys 963
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |||SerIleMetGlu 883
|||||||||||||
|NAAGTATAATGGAA 842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .nTyrLysLysTrp 1003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCTTGTCTCAAA 1142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INPROSERLEUILE 903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATACAAAAAGTGG 1202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ||||||||||||
|CATTGTAAGAGAA 1022
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATCCATGTAATT 962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               pIleHisVallle 923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rIleValArgGlu 943
```

```
Alignment Scores:
Pred. No.:
Score:
Score:
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
;
                                                                                                                                                                                                                                             8 8 8 8
                                                                                                                                                                                                                                                                                                                                                   성 음 성
                                 ঠ
                                                               B
                                                                                   ঠ
                                                                                                                     밁
                                                                                                                                       5
                                                                                                                                                                 음 상 음
                                                                                                                                                                                                                                                                                                                                                                                                                               B 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: DNA
ORGANISM: Homo s
FEATURE:
NAME/KEY: CDS
LOCATION: (190).
3-09-799-451-771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -09-515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     386
                                                                                                                      802
                                                                                                                                                                                                                           682
                                                                                                                                                                                                                                                    486
                                                                                                                                                                                                                                                                              649
                                                                                                                                                                                                                                                                                                        466
                                                                                                                                                                                                                                                                                                                                  589
                                                                                                                                                                                                                                                                                                                                                                                                               426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190
                                                                                                                                                                      GlnMetSerProMetSer---AspPheGlyThrGlnProTyrGluGlnTrpAlaIleGln
                                                                                                                     LeuLysAsnAsnArgLeuLysLysGluAsnLysProValIleProLeuProGlnIleLeu
                                                                                                                                                                                                                                                                                                                                                                                    ValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPheLeuLysLysTrpTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeuGluGlyLysAsnIle
                 GAGATGCCTGAGTTGAGCCGGAAATTTGGGA
                                                                                ArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArgIleGlnThrTyrCys ::::||| | | | | :::
                                                                                                                                                                                                                                                                                CTCCAGAGGGCACAG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCGTGACAACCCTGAGTGGGGACATGGGACCACGTGCTGGCCTTTTGGCCACCTGGCCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSerPheProGluValValLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-1025) \times US-09-799-451-771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGTGACCCAG---CATGGTGAAGAGTTCAGGCGCATGCTGGATGGACGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.17e-139
1352.00
59.7%
40.7%
25.5%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-2590)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2590
292
136
237
52
12
                                                                                                                                              545
                                                                                                                                                                                                                                                     505
                                                                                                                                                                                                                                                                               681
                                                                                                                                                                                                                                                                                                        485
                                                                                                                                                                                                                                                                                                                                                             465
                                                                                                                                                                                                                                                                                                                                                                                      588
                                                                                                                                                                                                                                                                                                                                                                                                               445
                                                                                                                                                                                                                                                                                                                                                                                                                                          534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  325
                                                                                                                                                                                                  525
                                                                                                                                                                                                                                                                                                                                  648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               345
                 186
                                                                                                                                                  8 8 8 8 8 8
                                                                                                                                                                                                                                                                                                                                     장 함
                                           중 음 중 음
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   음 성 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            음 성
                                                                                                                                                                                                                                                                                                                                                                                                  1489
                                                                                                                                 1789
                                                                                                                                                                                                                                                                                                                                               1549
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1042
                                                                                                                                                                                                                                                                                                                                                                                                                          785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                765
                                                                             AsnLysAlaLeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyG
                                                                                                                                 GCGGCCCAGGCAGCCCAGCGGGAGAACCAGCGGCAGCAGTTCCCAG
                                                                                                                                                                                                                                                            ThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCy
                                                                                                                                                                                                                                                                                           LysMetHisHisValAsnMetThrProGluPheLysGluLeuTyr---IleValArgGlu 943
                                                                                                                                                     LysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsnAsnP
                                                                                                                                                                                   LysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMetGlnSulleLeuGlnEeuGluLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnMetGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulleLeuGlnSulle
                                                                                                                                                                                                                                        ThrLysThrArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThrGluAsnGluLysPhe 744
|||:::|||||||||||||||:::::|||
ACCCGCACCCGCCAAAGCGCACACTCCCTCCTGCTCTGGCTCCAGCAGCAGCAGCAGCCTG 1368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAAAGATCCTGCAAAGGCAGTTCAGT---AGCTCTAACAGCCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetI
|||:::||||||:::||
AGGCGCTACAATGACGCGCTGCTCATCCATGACACCGTCCGCGCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgAsnThrIleMetGluGlnTyrThrArgThrGluGluSerAlaA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LysMetLeuLysArgLeuAlaGluAsnProGluTyrGluAsnGluL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LysProLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SerAspGluGlyGlyAspAspGluTyrCysAspGlyAspGluAspG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGAGCTGGCCCACTTGGCAACTCATGGCCCA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCGAGCGCCGGCTGCTGGCCCTGT
                                                                                                                                                                                                                                                                                                                                                                                                   |||||||
|GGACATCCCACATTGCAATGTGGTG 1548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -GAGAATCCAA
                                                                                                                                                                                                                                                                                                                                               rgGlyArgAlaArg 824
                           ATGTCTCCÁGGGAT 1968
                                                                               ::
TGCGGAAGGTGGAG 1908
                                                                                                     leHisValIleGļu 924
                                                                                                                                   TGGAGCACGTGCAG 1848
                                                                                                                                                           roSerLeuIleThr 904
                                                                                                                                                                                    CCTTGACCAAGCGG 1788
                                                                                                                                                                                                              erIleMetGluLys 884
                                                                                                                                                                                                                                                                                                                                                                                                                          luCysAsnIleVal 804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACTGGAGATGCTG 1251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCGATGACCGCAAG 1194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   luAspAspLeuLys 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTG----- 1152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGGATGCCTTGGCT 1101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        leAspAlaTyrThr 624
   luIleIleCysLys 963
                                                                                                                                                                                                                                          CTĠTĠĊĀĠAAAĀTĠ 1728
                                                                                                                                                                                                                                                                 ysValGlnAsnMet 864
                                                                                                                                                                                                                                                                                             AGCTGAAGCGGGAG 1668
                                                                                                                                                                                                                                                                                                                     alIleGluHisGlu 844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ĠĊĀĠĊCAGAGCACC 1428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  erSerGluPheLys 764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hePheGluAsnAsn 684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATĠĊĠCTTĊĂĊĊTĠ 1041
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rgGlyIleIlePhe 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sLeuThrLysLeu 704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----- 1155
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; FEATURE:
; NAME/KEY: unsure
; LOCATION: 342, 355, 365, 368, 3
; OTHER INFORMATION: a or c or g
US-09-907-907A-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
US-09-907-907A-32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                 ঠ
                                                                                                                                                                     멍
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                          ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              $
RESULT 4
US-08-143-576-7
                                                                         ş
                                                                                                        멍
                                                                                                                                                                                                   ફ
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                            US-09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Fisher, Paul B.
APPLICANT: Leszcyniecka, Magdalena
TITLE OF INVENTION: GENES DISPLAYING ENHANCED EXPRESSION DURING CELLULAR
TITLE OF INVENTION: TERMINAL CELL DIFFERENTIATION AND USES THEREOF
FILE REFERENCE: A34584-A-PCT-USA (070050.1664)
CURRENT APPLICATION NUMBER: US/09/907,907A
CURRENT FILING DATE: 2001-07-16
PRIOR APPLICATION NUMBER: US 09/243,277
PRIOR APPLICATION NUMBER: US 09/243,277
PRIOR FILING DATE: 1999-02-02
NUMBER OF SEQ ID NOS: 51
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 32, Application US/09907907A Parent No. 6951923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q ID NO 32
LENGTH: 458
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1969
                                                                            1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    983
                                                                                                          183
                                               243
                                                                                                                                         995
                                                                                                                                                                       123
                                                                                                                                                                                                                                                                 955
                                                                                                                                                                                                                                                                                                                              935
                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                                                                  w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlnIleAsnGlyGluIleIleCysLysCysGlyGlnAlaTrpGlyThrMetMetValHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TrpValGluLeuProlleThrPheProAsnLeuAspTyrSerGluCysCys 1019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LysIleArgAsnPheValValValPheLysAsnAsnSerThrLysLysGlnTyrLysLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACTGTGGGGAGGTCTGGGGGTCTGCAGATGATCTACAAGTCAGTGAAGCTGCCAGTGCTC
                                                                                                                                                                                                                                     CAAATAAATGGTGAAATCATCTGCAAATGTGGCCAGGCTTGGGGAACAATGATGGTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGTCCCGCGTGCCTTCTCCGTGCCTGACTTTGACTTCCTGCAGCATTGT
                                                                 TyrSerGluCysCysLeuPheSerAspGluAsp
                                                                                                          TCAACAAAGAAACAATACAAAAAGTGGGTAGAATTACCTATCACATTTCCCCAATCTTGAC
                                                                                                                               SerThrLysLysGlnTyrLysLysTrpValGluLeuProIleThrPheProAsnLeuAsp
                                                                                                                                                                       AAAGGCTTAGATTTGCCTTGTCTCAAAATAAGGAATTTTGTAGTGGTTTTCAAAAATAAT
                                                                                                                                                                                            LysGlyLeuAspLeuProCysLeuLysIleArgAsnPheValValValPheLysAsnAsn
                                                                                                                                                                                                                                                                                                                 PheLysGluLeuTyrIleValArgGluAsnLysAlaLeuGlnLysLysCysAlaAspTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CysGlyGlnAlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuProCysLeu
                                                                                                                                                                                                                                                                                                                                                            (1-1025) x US-09-907-907A-32 (1-458)
                                                                                                                                                                                                                                                                                                                                                                                            1.43e-45
498.00
98.9%
98.9%
98.9%
9.4%
                                                                                                                                                                                                                                                                                                ---ATGCTGCTGGAGACCCCTCAGGGGCGGATCCÁGGCCÁÁÁÁÁÁG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  375,
g or 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d
                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                381,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 385,
                                                                             1025
                                                275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  414,
                                                                                                                                                                                                                                                                                                                                                                                            90
90
1
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2028
                                                                                                                                                                          182
                                                                                                                                                                                                                                                                    974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 982
                                                                                                                                          1014
                                                                                                                                                                                                       994
                                                                                                                                                                                                                                       122
                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SENESCENCE
                                                                                                                                                                                                                                                                                                                                                               Query
DB:
                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/143,576
FILING DATE: 25-OCT-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: White, John P.
REGISTRATION NUMBER: 28,678
REFERENCE/DOCKET NUMBER: 43563/JPW/AKC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 977-9550
TELEFAX: (212) 664-0525
TELEX: 422523 COOP UI
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 301 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                        S
                                                                                                                                                                    5
                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                S
                                         ঠ
                                                                              В
                                                                                                                                          뮍
                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                  US-09-515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; ANTI-SENSE:
US-08-143-576-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent No. 5643761

GENERAL INFORMATION:
APPLICANT: Fisher, Paul B.
APPLICANT: Jiang, Hongping
TITLE OF INVENTION: METHOD FOR GENERATING A SUBSTRACTED TITLE OF INVENTION: CDNA LIBRARY AND USES OF THE GENERATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 7, Application Patent No. 5643761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE: John P. White, c/o C. STREET: 30 Rockefeller Plaza CITY: New York STATE: New York COUNTRY: U.S.A. ZIP: 10112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: John P. W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                            No::
                                                                                                                                             123
                                                                                                                                                                                                                                                                                                    476
                                                                                                                                                                           516
                                                                                                                                                                                                                                       496
                                                                                                                                                                                                         63
                                                                                                                                                                                                                                                                       w
                                                                                                                                                                                                        LysProValI1eProLeuProGlnI1eLeuGlyLeuThrAlaSerP
                                                                             CysLysPheAlaIleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeu 555
                                                                                                                                         TTTACTATTAAAACTGTTAAAGAAAACCTTGATCAACTGAAAAAACCAAATACAGGAGCA- 181
                     GAAATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCCAATGT
                                      GluIleMetThrArgIleGlnThrTyrCysGlnMetSerProMetSe
                                                                                                                                                               PheThrIleLysThrValLysGluAsnLeuAspGlnLeuLysAsnG:
                                                                                                                                                                                                                                                                       AAACCAGTGATTCCCCTTCCTCAGATACTGGGACTAACAGCTTCAC
                                                                                                                                                                                                                                                                                                                                   (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                 5.3e-43
472.00
98.0%
98.0%
8.9%
2
                                                                                                                                                                                                                                                                                                                                   x US-08-143-576-7 (1-301)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08143576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cooper
                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                 301
97
0
2
1
                                                                                                                                                                                                                                                                                            roGlyValGlyGly 495
                      CAGATTTTGGA 298
                                                                                                                                                                                                                                                                          CTGGTGTTGGAGGG 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATED LIBRARY
                                                                                                                                                               )rAspPheGly 574
```

```
Sequence 1, Application US/09590968B; Patent No. 6737561; GENERAL INFORMATION:
APPLICANT: Ray, Animesh
APPLICANT: Golden, Teresa Ann
TITLE OF INVENTION: GENE ENCODING SHORT INTEGFILE REFERENCE: 176/60581; CURRENT APPLICATION NUMBER: US/09/590,968B; CURRENT FILING DATE: 2000-06-09; PRIOR APPLICATION NUMBER: 60/138,316; PRIOR FILING DATE: 1999-06-09; NUMBER: OF FECT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 5
US-09-221-268D-12
                                                                                                                                                                                                                                                            RESULT 6
US-09-590-968B-1
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-515-363C-2 (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-221-268D-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Fisher, Paul B.

APPLICANT: Fisher, Paul B.

APPLICANT: Jiang, Hongping

TITLE OF INVENTION: NUCLEIC ACID MOLECULES WH

TITLE OF INVENTION: NUCLEIC ACID SEQUENCE EN

FILE REFERENCE: A34534-A-A (070050.1637)

CURRENT APPLICATION NUMBER: US/09/221,268D

CURRENT FILING DATE: 1998-12-23

PRIOR APPLICATION NUMBER: 08/316,537

PRIOR FILING DATE: 1994-09-30

PRIOR FILING DATE: 1994-09-30

PRIOR APPLICATION NUMBER: 08/143,576

PRIOR FILING DATE: 1993-10-27

NUMBER OF SEQ ID NOS: 30

SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 12, Application Patent No. 6720408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                         SOFTWARE: PatentIn
EQ ID NO 1
                                                                      NUMBER OF SEQ ID NOS: 18
        LENGTH: 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: DNA
ORGANISM: homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ID NO 12
ENGTH: 301
                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                476
                                                                                                                                                                                                                                                                                                              242
                          6184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LysProValIleProLeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AlaThrLysGlnAlaLysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAla
                                                                                                                                                                                                                                                                                                              GAAATAATGACAAGGATTCAAACTTATTGTCAAATGAGTCCAATGTCAGATTTTTGGA
                                                                                                                                                                                                                                                                                                                               GluIleMetThrArgIleGlnThrTyrCysGlnMetSerProMetSerAspPheGly
                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTACTATTAAAACTGTTAAAGAAAACCTTGATCAACTGAAAAACCAAATACAGGAGCA-
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheThrIleLysThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCACGAAGCAAAGCTGAAGAACACATTTTAAAACTATGTGCCTATCTTGATGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAACCAGTGATTCCCCTTCCTCAGATACTGGGGACTAACAGCTTCACCTGGTGTTGGAGGG
                                                                                                                                                                                                                                                                                                                                                                                           CysLysPheAlaIleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.3e-43
472.00
98.0%
98.0%
8.9%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             x US-09-221-268D-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/09221268D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                    INTEGUMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-301)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WHICH SPECIFICALLY HYBRIDIZE WITH ENCODING MDA-7 AND PHARMACEUTICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
97
0
2
1
                                                                                                                                                                    AND USES
                                                                                                                                                                                                                                                                                                                                            574
                                                                                                                                                                                                                                                                                                              298
                                                                                                                                                                                                                                                                                                                                                                                                         555
                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPOSIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                     S
                                                                                                                  S
                                                                                                                                                   g
                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-515-363C-2 (1-1025) x US-09-590-968B-1 (1-6184)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-590-968B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                        166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                            ArgGlnThrGlyAsnAsnGluLeuValGlnGluLeuThrGlySerAspCysSerGluSer 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IleGluAspArgAsnArgIleAlaAlaAlaGluAsnAsnGlyAsnG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GluLeuThrAspLeuProSerProSerPheGluAsnAla-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCTTTT-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GlupheValGluAlaLeuArgArgThrGlySerProLeuAlaAlaArgTyrMetAsnPro 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAAAACACTCTTCTCTCTCACCCCTTTTTCTGGGTTTATTCAAT-
                                                                                                                                                                                                                                                                                                                                                                                                                                      GluLeuLeuLysArgIleValGlnLysGluAsnTrpPheSerAlaPheLeuAsnValLeu 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspLysLeuLeuValArgAspValLeuAspLysCys---MetGluG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaValGluLeuLeuSerThrLeuGluLy8GlyValTrpHi8LeuGlyTrpThrArg 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAAACAACTTCAAAATTGGCGTGTTTCGTACGGTCTA-TCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ala----GluValLysGluGlnIleGlnArgThrValAlaThrS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTAGGGTTTTGCTTGCTCTTCGTGACCCC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AlaArgValLysMetTyrIleGlnValGluProValLeuAspTyrL
:::||||||
                                                                                                                                                                                                               AAGGAGACAGTGAAGGAGAATGGGTTTGCAAAAGAATGGCGGTAAGAGACGAATTCTCG 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAATTTGATCCTTCTGTTGCTGTCAATGAATCCACT---GATGAAAACGGCGTC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TyrLeuGlnLeu----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAGAGGAAGGAGACAAGGATAGGAAGAGAGCTAGGGTTTGTAGTTATCAGAGTGAAAGG 781
                                                                                                                                                                                    SerGluSerSerPheAlaAsp
                                                                                                                                                                                                                                           SerThrThrValGlnProAsn---LeuGluLysGluValTrpGlyMetGluAsnAsnSer 244
                                                                                                                                                                                                                                                                                |||::::::|||
|AATTCTCAAATCAACGAGGTTACTGTAACT--
                                                                                                                                                                                                                                                                                                   AsnAlaGluIleGluAsnLeuSerGlnValAspGlyProGlnValGluGluGlnLeuLeu 225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCTAGATGCTTGC-GAGGACATC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATATAGAATTATGGTAATGGAGGATGAGCCTAGAGAAGCCACAAT
                                                                                          AGTAACCTTTCAGGTAGAĠĠĠCATĠŤŤAATAATTCTAGGĠÁĠGGAGATAGGTTTATGAAT 841
                                                                                                                       AspThrSerLeuAlaGluGlySerValSerCysLeuAspGlu----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.06e-33
406.00
39.8%
23.6%
7.6%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----LeuAsnLeuLeuGlnPro----
                                                                                                                                                                                                                                                                                                                                                                                                          -ATCAATGATTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                           SerLeuGlyHisAsn-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ----TCTTGTGATCTTATCGATGATCTCGTGTCT 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ------GGTTCTGTTTTCTCTGGG 305
                                                                                                                                                                                                                                                                                                                                                                                                           CGGTGGGATTGATCACATTTTA 565
                                                                                                                                                                                    -SerSerValValSerGluSer 258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6184
231
158
316
375
47
----SerAsnMet 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAAGCCTTCTTATT 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :: |||:::
ACCCTAATCTGTCA 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  erGlyAsnMetGln 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       euThrPheLeuPro 39
                              AAAGGGAATGTAAC 901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----HisAspGlu 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     luGluLeuLeuThr 145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    luSerGlyValArg 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----ThrLeuVal 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            :::|||
----TCTCGT 278
                                                                                                                                                                                                                                                                                  -----ATTGCT 661
                                                             -- 277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         529
                                                                                                                           272
```

542 aAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIleMetThrArgIl	483 nIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThrLy8GlnAlaLy8Al 502		IValLysSerCysAspIleIleIleSerThrAlaGlnIleLeuGluAsnSerLeuLeuAs 423	250 CAGAACAGAAAAATGCTCTCGGTGTTCTTGGTTCCCAAAGTGCCTTT. 369 ValGluGlnLeuPheArgLy8Glu	LeuGluGlyLyBABNITellelleCyBLeuProThrGly	AATTACAGAAGAGATGGTAGAGATAGAGAAGTTAGGGGTTATTGGGAGAGGGATAAAGTT GlySerAspSerGlyThrMetGlySerAspSerAsp :::
RESULT 7 US-08-916-421B-1 ; Sequence 1, Application US/08916421B ; Patent No. 6503729 ; GENERAL INFORMATION: ; APPLICANT: Bult et al. ; TITLE OF INVENTION: Complete Genome Sequence of the Methanogenic Archaeon, Met ; Patent No. 6503729 ; TITLE OF INVENTION: jannaschii ; FILE REFERENCE: PB275 ; CURRENT APPLICATION NUMBER: US/08/916,421B	Db 2542 TGTGACACTGTTAGTTGCCACAAGCGTTGCTGAGGAAGGA	-B Ω< Ω H	Qy 706 nThrIleMetGluGlnTyrThrArgThrGluGluSerAlaArgGlyIleIlePheThrLy 726	Qy 666 OLeuLysLeuAspGluThrAspArgPheLeuMetThrLeuPhePheGluAsnAsnLysMe 686 Db 2287 CGCAGTGGCTGAT	Db 2107 CCTCAGTGAGGTGTCTCTTGCAATGTGAGCTTCTGGAAGGCGCTGCTGAAAA 2166 Qy 643	Db 1867 GCAATTTATGGGGGCTAGGGATGCTGGAGCAAAGGATGAATTGAGACAGGTTTATGGCGT 1926 Qy 601 aGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleArgMetIleAs 621

ঠ

8

Methanoco

유정

8 8 8

8 8 8

B 65 B

ঠ

8 8 8 8 8 8

TYPE: DNA
TYPE: DNA
ORGANISM: Methanococcus j
FEATURE:
NAME/KEY: misc feature
LOCATION: (28222)..(2822)
OTHER INFORMATION: n equi SOFTWARE: NAME/KEY: misc feature
LOCATION: (191995)...(191995)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (231980)...(231980)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (234187)...(234187)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (234220)...(234220)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (234814)...(234814)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (309398)...(309398)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (309398)...(309318)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (309318)...(309418)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (309318)...(309418) NAME/KEY: misc feature
LOCATION: (98266)...(98266)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (98343)...(98343)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (103998)...(103998)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature
LOCATION: (148948)...(148948)
OTHER INFORMATION: n equals a,
NAME/KEY: misc feature NAME/KEY: misc feature
LOCATION: (163385)...(163385)
OTHER INFORMATION: n equals a
NAME/KEY: misc feature
LOCATION: (191989)...(191989)
OTHER INFORMATION: n equals a NAME/KEY: misc feature
LOCATION: (98120)..(98120)
OTHER INFORMATION: n equals a
NAME/KEY: misc feature
LOCATION: (98159)..(98159)
OTHER INFORMATION: n equals a
NAME/KEY: misc feature
LOCATION: (98239)..(98239)
OTHER INFORMATION: n equals a OTHER INFORMATION: n equals a NAME/KEY: misc feature LOCATION: (28257)..(28258) OTHER INFORMATION: n equals a NAME/KEY: misc feature LOCATION: (84773)..(84773) OTHER INFORMATION: n equals a NAME/KEY: misc feature LOCATION: (84808)..(84808) OTHER INFORMATION: (84808) OTHER INFORMATION: n equals a OTHER INFORMATION: n equals a NAME/KEY: misc feature CURRENT FILING DATE: 1997-08-22
PRIOR APPLICATION NUMBER: US 60/024,428
PRIOR FILING DATE: 1996-08-22
NUMBER OF SEQ ID NOS: 3 OTHER INFORMATION: n NAME/KEY: misc featur LOCATION: (84812)..(8 OTHER INFORMATION: n) 1 : 1664976 PatentIn version 3.1 (84812) (28222) equals jannaschii g ā a ø þ a a, a, b a) a, a , a a gi V ā a a a, a þ a, ŢŤ Ţ Ĺ Ç Ţ Ĺ ŗ Ļ Ţ Ĺ ŗ , Ĺ ή Ĺ ū Ĺ ú ū ú ú ů ú ú ú ú ú ú ů ú ú ú ū ú ū õ ú ú ဝူ 9 ö ö g å or 9 å 9 8 Or ö å e g ω ω ß g ω Ω ω ω ω Q Ω Q Q Q g g Ω g ω ω

LOCATION: (319226)...(319226)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (559167)...(559241)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (559241)...(559241)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (600992)...(600992)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (622708)...(622708)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (657081)...(657081)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (657081)...(657092)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (65703)...(65703)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (662442)...(682442)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (779455)...(779455)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (779455)...(779455)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (871619)...(871619)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (1084830)...(1084830)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (1084830)...(1084830)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(1096846)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(11096846)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(11096846)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(11096846)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(11096846)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(11096846)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(11096846)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(11096846)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(11096846)
COTHER INFORMATION: n equals a, tname/key: misc_feature
LOCATION: (11084830)...(110881) OTHER INFORMATION: n equals a, t NAME/KEY: misc_feature LOCATION: (1310988)..(1310988) OTHER INFORMATION: n equals a, t NAME/KEY: misc_feature LOCATION: (1313224)..(1313224) OTHER INFORMATION: n equals a, t NAME/KEY: misc_feature LOCATION: (1349473)..(1349473) OTHER INFORMATION: n equals a, t NAME/KEY: misc_feature OTHER INFORMATION: n equals NAME/KEY: misc feature LOCATION: (312993)...(312993) OTHER INFORMATION: n equals NAME/KEY: misc feature NAME/KEY: misc feature LOCATION: (312837)..(310THER INFORMATION: n ex (312837) a ø ÇŤ ΄, Ļ Ĺ ŗ Ļ Ĺ t, Ĺ Ĺ ŗ Ţ Ĺ Ĺ Ĺ ί, ŗ ŗ Ţ Ĺ Ţ Ĺ ů, Ċ, ņ ů, ú 'n ũ G ú ņ ú ú 'n ú ú G Ç 0 Ω ú ú 'n ú o R å 20 9 ç ö or õ မ္ပ or ဝူ ဝူ 유 å å õ ů, õ å Q ω Q Q ω Ø Ω ω Ω Q φ Ø ω Q g Θ Ω Q Ω Q ω g ω

GTTTAACGGCATCTCCAGGT	485 LeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThrLysGlnAlaLysAlaGluGlu 504	Qy 465 LysLeuLysAsnAsnArgLeuLysLysGluAsnLysProValIleProLeuProGlnIle 484 	QY 445 CysHisHisThrAsnLysGluAlaValTyrAsnAsnIleMetArgHisTyrLeuMetGln 464 	QY 426 AsnGlyGluAspAlaGlyValGlnLeuSerAspPheSerLeuIleIleIleAspGlu 444 ;:: ;:: ::: Db 1659118GCTGGAAGAATAAATGTGGATGAATTTATTTATTGATAGCTGATGAA 1659165	Qy 406 SerCyBAspIleIleIleSerThrAlaGlnIleLeuGluAsnSerLeuLeuAsnLeuGlu 425 ::: :::::: ::::::	Qy 386 ArgValIleGlyLeuSerGlyAspThrGlnLeuLysIleSerPheProGluValValLys 405 :::::::	Qy 366 ValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPheLeuLysLysTrpTyr 385	laserGlul	QY 326 IleIleCysLeuProThrGlySerGlyLysThrArgValAlaValTyrIleAlaLysAsp 345 :::	:::	US-09-515-363C-2 (1-1025) x US-08-916-421B-1 (1-1664976) Qy 306 ĻeuGlnLeuĀrgProŢγrGlnMetGluValĀļaGlnProĀļaĻeuGluGlγĻγsĀsnīle 325	ry Match: 7.4% Mismatches: 24 ry Match: 7.4% Indels: 19 Gaps: 27	nment Scores: . No.: 1.03e-27	08-916	LOCATION: (1664854)(1664855)	LOCAT OTHER	NAME/KEY: misc feature LOCATION: (1603734)(1603734) OTHER INFORMATION: n equals a, t, c, or	NAME/ LOCAT	ION: (1470091)(1470091) INFORMATION: n equals a, t, c, o KEY: misc_feature ION: (1569020)(1569020)	LOCATION: (1349491)(1349491 OTHER INFORMATION: n equals a NAME/KEY: misc_feature
Qy 828SerThrTyrValLeuValAlaHisSerGlySer 838	Qy 808 GlyLeuValThrAsnGluIleAlaMetValGlnAlaArgGlyArgAlaArgAlaAspGlu 827 :::	1659991 TCAACAAGCGTTTCTGAGGAGGGAATAGATATTCCATCGGTAAATTACATCATATTTAT			728 1659835	1659787 ATTTTGGAAAAAATAAGGATGAGAGAATTATTATCTTTGCTCAATAT	1659760	Qy 668 LysLeuAspGluInrAspArgPneLeuMeCInrLeuPnePneGluAsnAsnLysMeCLeu 80/ :::	1659702	Qy 648 GlyGlyAspAspGluTyrCysAspGlyAspGluAspGluAspAspLeuLysLysProLeu 667	628 ThrPheTyrAsnGluGluLysAspLysLysPheAlaValIleGluAspAspSerAspGlu	Qy 614 AsnAspThrIleArgMetIleAspAlaTyrThrHisLeuGlu 627 :::::::: Db 1659592 ATGCATGCCAAAGAACTCTTAGAGAGTCAAGGAAAGAGTGTATTTTTAAACTATATAAAT 1659651	Qy 594 AsnArgLysGluArgValCysAlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIle 613		574 GlvThrGlnDroTvrGlnGlnTrnAlaIleGlnMetGlnLvsLvsAlaAlaLvsLvsGlv	Qy 554 LeuLeuGluIleMetThrArgIleGlnThrTyrCy8GlnMetSerProMetSerAspPhe 573	Qy 548	CCCAACGAATTTAAAAGAGCGTTAAAATTAATAAATGAAGCTTTAAAGGAGAGA	1659331 GATGAGGATGTAAAACCATACATTGCTAAAGTAAAACTTATCCCAATTA	

```
RESULT 8
US-09-692-570-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                               SOFTWARE:
SEQ ID NO 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Bult et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No. 6797466
                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent
                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION NUMBER: US/09/692,570
CURRENT FILING DATE: 2003-01-14
PRIOR APPLICATION NUMBER: US 60/024,428
PRIOR FILING DATE: 1996-08-22
PRIOR APPLICATION NUMBER: US 08/916,421
PRIOR FILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                        atent No. 6797466
TITLE OF INVENTION: jannaschii
FILE REFERENCE: PB275C1
                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID
                                                                                                                                                                                                                                                    LENGTH:
FEATURE:
NAME/KEY: misc feature
LOCATION: (84808)..(84808)
OTHER INFORMATION: n equal
FEATURE:
                                                                   FEATURE:
NAME/KEY: misc_feature
LOCATION: (84773)..(84')
OTHER INFORMATION: n e
                                                                                                                       NAME/KEY: misc feature
LOCATION: (28257)..(28258)
OTHER INFORMATION: n equal
                                                                                                                                                                               FEATURE:
NAME/KEY: misc_feature
LOCATION: (28222)..(28:
OTHER INFORMATION: n ec
                                                                                                                                                                                                                                      ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1660528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1660408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1660348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1660588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1660288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1660231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1660171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1660111
                                                                                                                                                                                                                                                                                                                                                                                                                                               OF INVENTION: Complete Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       879
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              859
                                                                                                                                                                                                                                                                  1664976
                                                                                                                                                                                                                                                                                            PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAATAAAGATTATTGTAGATGTTAGAGAGAAGAATATGGCTAAGCTTTTACATAATTAT
                                                                                                                                                                                                                                      Methanococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAAATATTGAGCTAAAAACATTAGAAGTGGGAGATTATGTTTTAAGTGATAGGGTAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HisCysValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTTTATACAAAGAAAGGGAGATGAAGAGATTATTAAAAAATATGTGTTATTTGCTAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTTGAGAGAAAGACAGCTGAAGACTTTGTAAATTCAATAATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGGAAAGGTCTAAATCAGAAGAAGATAAAATAAAACAAGAGATAAAAATTCCGAAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAGAAGAAAAACCAAAAAGCCAGTAACGATATTAGATTTCATTAAACAGATTGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAAGAAATAAAAGAAAAGAAATTGAATCAAAAACTGCAGTAAAAGAAGAAACTAAGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GlnSerIleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLys---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GlyValIleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAGGGAAGGTTTATGTTTAATAGCTAAGGGAACAGCTGATGAAGCTTATTACAGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---IleHisValIleGluLysMetHisHisValAsnMetThrPro---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -LeuAlaCysSerGlyGluAsp----
                                                                                                                                                                                                                                                                                                            NOS:
                                                                                                                                                                                                                                                                                            version
                                                                                                                                                                               n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -GluPheLysGluLeu-
                                                                   (84773)
n equals
                                                                                                                                                                                              (28222)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----AsnAsnProSerLeuIleThrPheLeuCysLysAsnCysSerVal
                                                                                                                         equals
               equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/09692570
                                                                                                                                                                                                                                     jannaschii
                                                                                                                                                                                                                                                                                            3.1
                                                                                                                                                                               a,
                a
                                                                    ø
                                                                   Ţ
                                                                                                                         ŗ
                                                                                                                                                                               Ļ
               Ţ
               Ü
                                                                   Ü
                                                                                                                         ú
                                                                                                                                                                               Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                     ö
                                                                                                                          e
                                                                                                                                                                               9
              ū
                                                                                                                                                                               ω
                                                                  ω
                                                                                                                        g
                                                                                                                                                                                                                                                                                                                                                                                                                                                  읁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TyrIleValArgGluAsnLysAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                the Methanogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       960
                                                                                                                                                                                                                                                                                                                                                                                                                                                Archaeon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1660587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1660467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1660347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1660287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1660527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1660170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1660407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1660230
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Methanoco
```

```
PEATURE:
NAME/KEY: misc_feature
LOCATION: (234220)..(234220)
OTHER INFORMATION: n equals a
FEATURE:
NAME/KEY: misc_feature
LOCATION: (234814)..(234814)
OTHER INFORMATION: n equals a
                                                                                                                                                                                                                                                                                                                 NAME/KEY: misc featurocation: (191989).
OTHER INFORMATION: FEATURE:
NAME/KEY: misc featurocation: (191995).
OTHER INFORMATION: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
NAME/KEY: misc_feature
LOCATION: (98343)...(98343)
OTHER INFORMATION: n equals
FEATURE:
                                                                                                                                                                                                                                                                          FEATURE:

NAME/KEY: misc_feat
LOCATION: (231980).
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY:
LOCATION:
       FEATURE:
NAME/KEY: misc feature
LOCATION: (312837)..(312837)
OTHER INFORMATION: n equals
FEATURE:
                                                         FEATURE:
NAME/KEY: misc feature
LOCATION: (309418)..(309418)
OTHER INFORMATION: n equals
                                                                                                   FEATURE:
NAME/KEY: misc_feature
LOCATION: (309398)..(309398)
OTHER INFORMATION: n equals
                                                                                                                                                                                                                                FEATURE:
NAME/KEY: misc_feature
LOCATION: (234187)..(2:
OTHER_INFORMATION: n ec
                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: misc feature LOCATION: (148948)..(1.OTHER INFORMATION: n economic neconstruction)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: misc_feature
LOCATION: (103998)..(103998)
OTHER INFORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
NAME/KEY: misc_feature
LOCATION: (98266)...(98266)
OTHER INFORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: (98159)..(98159)
OTHER INFORMATION: n equals
FEATURE:
NAME/KEY: misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: FEATURE: NAME/KEY: misc_feat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: misc_feature
LOCATION: (84812). (848
OTHER INFORMATION: n ed
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEY: misc feature
ION: (98239)..(98239)
INFORMATION: n equal
                                                                                                                                                                                                                                                                                                                                                                                                    : misc_feature
: (163385)..(16
FORMATION: n eq
                                                                                                                                                                                                                                                                         : misc_feature
: (231980)..(23
FORMATION: n eq
                                                                                                                                                                                                                                                                                                                    misc_feature
: (191995)..(19
ORMATION: n eq
                                                                                                                                                                                                                                                                                                                                                          misc_feature
(191989)..(191989)
ORMATION: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature (98120) .. (98120)
misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
(98159)..(98159)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (84812)
                                                                                                                                                                                                                                                                                                                                                                                                      (163385)
1 equals
                                                                                                                                                                                                                                (234187)
equals
                                                                                                                                                                                                                                                                           (231980)
equals
                                                                                                                                                                                                                                                                                                                   (191995)
| equals
                                                                                                                                                                                                                                                                                                                                                                                                                                              (148948)
equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 equals
                   ā
                                                             ā
                                                                                                    a
                                                                                                                                              b
                                                                                                                                                                                        D
                                                                                                                                                                                                                                 þ
                                                                                                                                                                                                                                                                           þ
                                                                                                                                                                                                                                                                                                                                                             þ
                                                                                                                                                                                                                                                                                                                                                                                                      a
                                                                                                                                                                                                                                                                                                                                                                                                                                               D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                     ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       a
                                                             ŗ
                                                                                                    Ĺ
                                                                                                                                              Ĺ
                                                                                                                                                                                        Ţ
                                                                                                                                                                                                                                                                           Ļ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ŗ
                                                                                                                                                                                                                                                                                                                                                             ŗ
                                                                                                                                                                                                                                                                                                                                                                                                      Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                              ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ĺ
                   ú
                                                             'n
                                                                                                    ū
                                                                                                                                              ú
                                                                                                                                                                                        Ç
                                                                                                                                                                                                                                 ú
                                                                                                                                                                                                                                                                           ú
                                                                                                                                                                                                                                                                                                                    ū
                                                                                                                                                                                                                                                                                                                                                             Ö
                                                                                                                                                                                                                                                                                                                                                                                                      ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ō
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ũ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     û
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ů
                    å
                                                             g
                                                                                                      ů,
                                                                                                                                                õ
                                                                                                                                                                                        ö
                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                      å
                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç
                                                                                                    φ
                                                                                                                                              g
                                                                                                                                                                                       ω
                                                                                                                                                                                                                                ιQ
                                                                                                                                                                                                                                                                         ω
                                                                                                                                                                                                                                                                                                                   ıΩ
                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
```

```
PEATURE:
NAME/KEY: misc feature
LOCATION: (741684)..(741684)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (779455)..(779455)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (779676)..(779676)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (855539)..(855539)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (1084830)..(1084830)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (1084830)..(1084830)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (1096846)..(1096846)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (1096846)..(1096846)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (1119881)..(1119881)
                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc_feature
LOCATION: (657081)...(657081)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc_feature
LOCATION: (657203)...(657203)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc_feature
LOCATION: (674435)...(674435)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc_feature
LOCATION: (682442)...(682442)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc_feature
LOCATION: (713652)...(713652)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc_feature
LOCATION: (713652)...(713652)
OTHER INFORMATION: n equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
NAME/KEY: misc feature
LOCATION: (559241)..(559241)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (600992)..(600992)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (622708)..(622708)
OTHER INFORMATION: n equals a,
FEATURE:
NAME/KEY: misc feature
LOCATION: (622708)..(622708)
OTHER INFORMATION: n equals a,
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:

NAME/KEY: misc_feat:
LOCATION: (559167).

OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (312993)..(312
OTHER INFORMATION: n equ
FEATURE:
NAME/KEY: misc feature
LOCATION: (319226)..(319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ) feature
9167)..(559167)
"CN: n equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (312993)
1 equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (319226)
equals
                                           .(1096846)
equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ย
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                  ° 0
                                                                                                                                                                                                                                                                                                                                                                             ġ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       à
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a,
                                                                                                                                                       a
a
                                                                                                                                                                                                              Ø
                                                                                                                                                                                                                                                                    ā
                                                                                                                                                                                                                                                                                                                        a
a
                                                                                                                                                                                                                                                                                                                                                                                                                                  b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ני
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ĺ
                                                                                                                                                                                                                                                                                                                                                                             Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ĺ
                                             ţ
                                                                                                  Ç
                                                                                                                                                       (1
                                                                                                                                                                                                              ū
                                                                                                                                                                                                                                                                    Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ç
                                                                                                                                                       ū
                                                                                                                                                                                                              ū
                                                                                                                                                                                                                                                                    O
                                                                                                                                                                                                                                                                                                                        O
                                                                                                                                                                                                                                                                                                                                                                             ū
                                                                                                                                                                                                                                                                                                                                                                                                                                  ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ú
                                                                                                  ū
                                             ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e
                                                                                                                                                         or
                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                               9
                                                                                                                                                                                                                                                                                                                                                                                                                                   å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                             e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                        ω
                                                                                                 Q
                                                                                                                                                       φ
                                           ω
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Pred. No.: Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                      á
                                                                                                                                                 á
                                                                                                                                                                                          S
                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                 멂
                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                       Вp
                                                           Š
                                                                                                                            밁
                                                                                                                                                                        맑
               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:

NAME/KEY: misc_feature
LOCATION: (1310988)..(1
OTHER INFORMATION: n eq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: n eqreature:
NAME/KEY: misc_feature
LOCATION: (1130881)..(1)
OTHER_INFORMATION: n eq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: n equifEATURE:
NAME/KEY: misc_feature
LOCATION: (1313224)..(1:
OTHER_INFORMATION: n equ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
NAME/KEY: |
LOCATION:
OTHER INFO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  515-363C-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              No : :
                                                                                                                                                                                                                                                             1659010
                                                                                                                                                                                                                                                                                                                                                                                              1658848
                                                                                                                                                                                                                                                                                                                                                   1658905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            XEY: misc_feature ION: (1349473)..(
                                                                                                                                                                                                                                                                                                                                                                                                                  326
                                                                                                                                                                                                                                                                                                                                                                                                                                                            306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scores:
                                                                                                                                                                                                                                                                                                                                                   ATTTTAACAAAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                     LeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeuG
                                                     LeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThrLysGlnA
|||||||||||||||||||||||
                                                                                                      LysLeuLysAsnAsnArgLeuLysLysGluAsnLysProVallleProLeuProGln[]e 484
                                                                                                                                                                         SerCysAspIleIleIleSerThrAlaGlnIleLeuGluAsnSerL
                                                                                                                                                                                                                                                              AGACCTTTGGTTGAGCACACTACAACAGATTAAAACAGGTTTTAA
                                                                                                                                                                                                                                                                                                                     ValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPheLeuLysLysTrpTyr 385
                                                                                                                                                                                                                                                                                                                                                              HisLeuAspLysLysLysLysAlaSerGluProGlyLysValIleValLeuValAsnLys 365
                                                                                                                                                                                                                                                                                                                                                                                              TGTGTT---
                                                                                                                                                                                                                                                                                                                                                                                                         TTGGAGGCGAGGTTGTATCAGCAGATTATTGCAGCAAATGCTTTAA
                   HisIleLeuLysLeuCy
                                                                                                                                                   Сувнівні
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-1025)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.03e-27
392.50
40.18
/: 23.08
7.48
                                                                                                                                                 BThrAsnLysGluAlaValTyrAsnAsnIleMetArgHisTyrLeuMetGln 464
                                                                                                                                                                                                                                                                                                                                                                                              TTATCGACAGGTTTAGGTAAAACAGCTATTGCTATTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .(1310988)
equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .(1130881)
equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .(1349473)
equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .(1313224)
equals a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      equals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-692-570-1 (1-1664976)
GTGAAAACTTAGGAATTGAGCACGTTGAAGTGAGAACTGAAGAT 1659330
                ysAlaAsnLeuAspAlaPheThrIleLysThrValLysGluAsn 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      a,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ĺ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ů
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ú
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ω
                                                                                                                                                                                                                                                                                                                                                     GATGGAAAGGTTTTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1664
169
125
241
199
27
                                                                                                                               GCATTTGTAGCAAAA 1659210
                                                            laLysAlaGluGlu 504
                                                                                                                                                                                                                     TCATA----- 1659117
                                                                                                                                                                                                                                         euLeuAsnLeuGlu 425
                                                                                                                                                                                                                                                                                                        ACATTGATGAAGAT 1659009
                                                                                                                                                                                                                                                                                                                                                                                                                  yrIleAlaLysAsp 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                            luGlyLysAsnIle 325
                                                                                     ----TGTCATATT 1659234
                                                                                                                                                                                                                                                                                                                                                     TCTTAGCCCCTTCA 1658949
                                                                                                                                                                                                                                                                                                                                                                                               TAGTTATAGCAGGT 1658904
                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAAAAAGACATTA 1658847
                                           --TCTGATATTGAT 1659270
```

`ATĊTĀĠĀTCTAGGGGAGACTTC	839 GlyValIleGluHisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIle 858 ::: :::	Q
Qy 346 HisLeuAspLysLysLysLysAlaSerGluProGlyLys	::: 11 GGAGGGAAGGTTTATGTTTTAATAGCTAAGGGAACAGCTGATGAA	da
Db 372 TTAAACACTGGCTCAGGGAAGACATTTATTGCTAGTACTAC	828SerThrTyrValLeuValAlaHisSerGlySer 838	Ş
Db 315 AGAAAATATCAGGTTGAACTGCTTGAAGCAGCTCTGGATValTy	808 GlyLeuValThrAsnGluIleAlaMetValGlnAlaArgGlyArgAlaArgAlaAspGlu 827 :::	D 04
Q	788 AlaThrThrValAlaGluGluGlyLeuAspIleLysGluCysAsnIleValIleArgTyr 807 	B 성
cal Similarity: 22.7% atch: 6.3% 3	768 GlnAsnGluGlnLysGluValIleSerLysPheArgThrGlyLysIleAsnLeuLeuIle 787 ::: ::: :::::: ::: 1659934 CAGAAAGAGCCAAATAGAAGCTATAGAGAGATTTAAAAAAGAGGGAAGTGTTTAGTT 1659990	ob dq
	748 GlyValLysAlaHisHisLeuIleGlyAlaGlyHisSerSerGluPheLysProMetThr 767	д У
; NAME/KEY: CDS ; LOCATION: (183)(5957) US-09-853-768-3	728 ArgGlnSerAlaTyrAlaLeuSerGlnTrpIleThrGluAsnGluLysPheAlaGluVal 747	Db Qy
# G ! E	708 IleMetGluGlnTyrThrArgThrGluGluSerAlaArgGlyIleIlePheThrLysThr 727	dg VQ
NUMBER OF	::: 1659760 1659786	DЬ
FILE REFERENCE: RTS-0217 CURRENT APPLICATION NUMBER: US	688 LysArgLeuAlaGluAsnProGluTyrGluAsnGluLysLeuThrLysLeuArgAsnThr 70	Ş
; APPLICANT: Donna T. Ward ; APPLICANT: Andrew T. Watt ; TITLE OF INVENTION: ANTISENSE MODULATION OF HELICASI	668 LysLeuAspGluThrAspArgPheLeuMetThrLeuPhePheGluAsnAsnLysMetLeu 687 ::: 	B 8
Sequence 3, Patent No. 6	02 16	B 4
RESULT 9	1659652 AAATTATCCATGCAAAGAACAAAATCAGCTAAATCTATTGTTAATGATGAA 1659702	\$ B
Db 1660588 GTTGAGAGAAAAGACAGCTGAAGACTTTGTAAATTCAATAA	628 ThrPheTyrAsnGluGluLysAspLysLysPheAlaValIleGluAspAspSerAspGlu 64	Ş
1660528	614 AsnAspThrIleArgMetIleAspAlaTyrThrHisLeuGlu 627 ::::::::::::::::::::::::::::::::::::	라 6 6
::: Db 1660468 CCAATAAAGATTATTGTAGATGTTAGAGAAGAATATGG Qy 934GluPheLygGluLeuTyrI	594 AsnArgLysGluArgValCysAlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIle 613	Db 09
920	1659537 1659537	DЬ
Qy 913LeuAlaCysSerGlyGluAsp	574 GlyThrGlnProTyrGluGlnTrpAlaIleGlnMetGluLysLysAlaAlaLysLysGly 593	δ
1660348 GAAGA	554 LeuLeuGluIleMetThrArgIleGlnThrTyrCysGlnMetSerProMetSerAspPhe 573 ::: ::: ::::: ::: 1659505 CTTATTGAGCTAAATAATAATTTTTCCTAT	B 8
868	1659445 TTAAAAATATTAAAAGATGCTGGAGTTATAAATTCCATTGCCGATGTAACAAAAACAGAA 1659504	ర్థ
Qy 879 GINSerlleMetGlubysbysmetbysTnrbysArgAsni 	548AspProPheLysGluLys 553	Ş
1660231	530AsnGinIleGinGluProCysLysLysPheAlaIleAlaAspAlaThrArgGiu 547	용 왕
Oy 859 HisCysValGlnAsnMetLysProGluGluTyrAlaHisLy	::: ::: 31 GATGAGGATGTAAAACCATACATTGCTAAAGTAAAACTTATCCCAATTAGAATTGATTTA 16	Ъ
1660171		

```
AAGGACGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        111e 960
                                                                                    IGlyLysAsnIleIleIleCys 328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTAAGCTTTTACATAATTAT 1660527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGATAAAAATTCCGAAAAAG 1660467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LysIleLeuGluLeuGlnMet 878
::: ::::: :::
GAGGAAATAAAGGAAGAGACA 1660287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATATGTGTTATTTGCTAAAT 1660230
                                         TyrIleAlaLysAsp----- 345
                                                                                                                                                                                                                                                                                                                                                                                        SE-MOI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   :IleValArgGluAsnLysAla 946
::::::
GTTTTAAGTGATAGGGTAGTT 1660587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ThrPro--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LeuCysLysAsnCysSerVal 912
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IleAlaLysHisTyrLys--- 897
::: ::: [||
GTAAAAGAAGAAACTAAGGAG 1660347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATT 1660629
---VallleValLeuValAsn 364
::: ||||||||
AGGACGGTGTTCTTGGTCAAC 491
                                                                                                                                                         7037
186
113
233
288
43
                                                                                                                                                                                                                                                                                                                                                                                        EXPRESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----- 919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---- 933
```

γ	ఠ	Ş	Ф	Ş	당 &	DЬ	ρ, ξ	5 5	дb	Ş	δ δ	đđ	Ş	망	Ş	g &	?	8	Db (§ §	P 6	망	Qy	망	γQ	Db	Ş	g 5	, B	8
652 GluTyrCysAspGlyAspGluAspGluAspAspLeuLysLysProLeuLysLeuAspGlu 671	1398 AGAAATCAGGATAATTATGTGTCATGGAGTGATTCTGAGGATGATGAT 1445	ysAspLysLysPheAlaValIleGluAspAspSerAspGluGlyGlyAspAs		617 IleArgMetIleAspAlaTyrThrHisLeuGluThrPheTyrAsn 631	605 ArgLysTyrAsnGluAlaLeuGlnIleAsnAspThr 616 ::: :::::::::::::::::::::::::::::::	1218 TTTTATTGTTTACAGACACTTTCCTAAGGAAAATACATGCACTATGTGAAGAGCACTTC 1277	8ArgValCysAlaGluHisLeu	584 GlnMetGluLy8Ly8AlaAlaLy8Ly8GlyA8nArgLy8Glu 597	 	571 SerAspPheGlyThrGlnProTyrGluGlnTrpAlalle	558MetThrArgIleGlnThrTyrCysGlnMetSerProMet 570	978 AGTGGGCTTTATGAAAGACTGCTGATGGAATTAGAAGAAGCACTTAATTTTATCAATGAT 1037	547 GluAspProPheLysGluLysLeuLeuGluIle	924 TATACTTCTCAGCCATGTGAGATTGTGGTGGATTGTGGACCATTTACTGACAGA 977	31 GlnIleGlnGluProCysLysLysPheAlaIleAlaAspAlaThrArg	867GAGAAAATTCTTAAGAGTAATGCTGAAACTGCAACTGACCTGGTGGTCTTAGACAGG 923	TGGGATCCAGAGGATTTGGAAGAAAAGTTTCAGAAACTA 8	7 ThrLysGlnAlaLysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPhe 	::: :::	78 VallleProLeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAla	458 MetArgH18TyrLeuMetGInLy8LeuLy8A8nA8nArgLeuLy8Ly8GIuA8nLy8Pro 477 :::	96 AACCTTTTGGTGTTTGATGAGTGTCATCTTGCAATCCTAGACCACCCCTATCGAGAATTT	38 SerLeuIleIleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAsnIle 4	654 TTGAATGTTTTGAAAAATGGTTACTTATCACTGTCAGACATT 695	LeuGluAsnG	\$	01ProGluValValLysSerCysAspIleIleIleSerThrAlaGlnIleLeu 41	384 TrpTyrargvallieGlyLeuserGlyAspTnrGlnLeuLySlleserPne 400 ::: 549GTTGGGGAATACTCAAACCTAGAAGTAAATGCATCTTGGACAAAAGAG 596	92 TCTGCAAACCAGGTTGCTCAACAAGTGTCAGCTGTCAGAACTCATTCAGATCTCAAG 5	5 LysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPheLeuLysLys 3 ::: ::
Ş	? 5	ş Ş	ב ל	\$ 8	DЬ	8 g	δ. 5	Db -2	0 5	ş &	ממ	Q (B &	? 5	\$ \$	DЬ	9	문 왕	3 5 5 7 8	δ	ДЪ	δ	40 40	? {	ξ. ξ	ם ס	. Q	DЬ	Qy	Db
See Agrinate ::: :::::	66	31.45	CACATCAATAGATACTGTGCTAGATTACCAAGTGATCCGTTTACTCATCTAGCTCCTAAA	LeuGlnLysLysCysAla-AspTyrGlnIleAs ::: :: 	:::::: ::: TATGTGTTGAGGCCTGACGATGGTGGTCCACGAGTCACAATCAACACGGCCATTGGA	938 LeuTyrIleValArgGluAsnLysAla946	AspIleHisValIleGluLysMetHisHisValAsnMetThrProGluPheLysGlu	 	ysSerValLeuAlaCysSerGlyGlu 9	879 GlnSerIleMetGluLysLysMetLysThrLysArgAsnIleAlaLysHisTyrLysAsn 898		HisCysValGlnAsnMetLysProGluGluTyrAlaHisLysIleLeuGluLeuGlnMet	840 VAIIIEGIUHIBGIUTHIVAIABHABPHEAIGGIUHYBMECMECIYIHYBAIGITE 656 	HAMPOREMENT TO THE LEGISTRE CONTRACT OF THE TABLE OF THE CONTRACT OF THE CONTR	820 ArgGlyArgAlaArgAlaAspGluSerThrTyrValLeuValAlaHisSerGlySerGly 839 	AAATGCAACTTGGTGGTTCGTTTTGATTTGCCCCACAGAATATCGATCCTATGTTCAATCT	800 GluCysAsnIleValIleArgTyrGlyLeuValThrAsnGluIleAlaMetValGlnAla 819	1716 GCACATGAGACCAACCTGCTTATTGCAACAAGTATTGTAGAAGAGGGTGTTGATATACCA 1775		SerSerGluPheLysProMetThrGlnAsnGluGlnLysGluValIleSerLysPheArg ::: :::	1611 AGTAGCAATTTCATAACTGGACATGGCATTGGGAAGAATCAGCCTCGCAACAACACGATG 1670	746 GluValGlyValLysAlaHisHisLeuIleGlyAlaGlyHis 759	GTTGTCTTAAACAGATTGATAAAGGAAGCTGGCAAACAAGATCCAGAGCTGGCTTATATC 1	TvralaLeuserginTrnIleThrGluAsnGluLvsPheala	712 TyrTnrArgTnrG1uG1uSerAlaArgG1y11ellePneTnrLy8TnrArgG1nSerAla 731 	GAGACAAATTTTCCTTCTCTTTTACCAACATTTTGTGC	GluAsnProGluTyrGluAsnGluLysLeuThrLysLeuArgAsnThrIleMetGluGln	1478 1478	672 ThrAspArgPheLeuMetThrLeuPhePheGluAsnAsnLysMetLeuLysArgLeuAla 691	

	438 SerLeuIleIleIleAspGluCysHi	349 AGAAACGACATAGCGCGCGGAATGGTCCCGCTCGAACAGTTC 3	418 GluAsnSerLeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGlnLeuSerAspPhe 4	(L)	Qy 400 PheProGluValValLysSerCysAspIleIleIleSerThrAlaGlnIleLeu 417	Db 238 GGCAGGGCCCTTACCATATCCGATATTACCCTGGTCACAGGCGAGACACC 288	382 LysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSer 3	Db 211 CTGGTAAAC	LeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPheLeu 	Db 151 GTGATCTCCCACTATTTGGACGAAGGCAGGGGGGCTCTCTTCCTTGCGCCCGACAAGGGTG 210		ÀÀCTGCÀTÀG	Qy 322 GlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysThrArgValAlaValTyr 341 ::: :::	Db 34 GAGCCCGGCGCCGTCGAGAGGCGCGACTACCAGGTGGGCCTTGCCGAGCAGGCCATACGG 93	303 GluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeuGlu 3	-09-515-363C-2 (1-1025) X 05-09-408-020-65 (1-1512)		y Match: 3.5% Indels:	t Similarity: 39.48	1.52e-21 Length:	ment scor	LOCATION: (S-09-408-020-6	FEATURE: NAME/KEY: CDS	; TIPE: UNA ; ORGANISM: Cenarchaeum symbiosum	LENGTH	SOFTWARE: FastSEQ for	NUMBER OF SEQ ID NOS: 123	PRIOR APPLICATION NUMBER: 60/1	APPLICATION NUMBER: U	TITLE OF INVENTION: NUCLEIC	APPLICANT: Feldman, Rob	APPLICANT: Swanson, I		S-09-408-020-65		2265 GTTGTCGCTCTCATTTGCTGTGAGAAACTGCACAAA	Qy 976 yLeuAspLeuPro	Db 2205 TCACCTCTTCGAGCCTCCATTGTTGGTCCACCAATGAGCTGTGTACGATTGGCTGAAAGA 2264
Qy	Дb	γQ	Db	δ	da	S S	ממ	ę V	Db	φ,	Db ·	Q Q	дb	Qy	дb	Qγ	дb	Qy	Db	Qy	da	γ	Дb	Ş	? {	<u></u>	Ş	qq	Qy	DЬ	γQ	дb	Qy	מ	ļ .	Q	da	Qy
791 ValAlaGluGlyLeuAspIleLysGluCysAsnIleValIleArgTyrGlyLeuVal 810	;:::::	771 GlnLysGluVallleSerLysPheArgThrGlyLysIleAsnLeuLeuIleAlaThrThr 790		752 HisHisLeuIleGlyAlaGlyHisSerSerGluPheLysProMetThrGlnAsnGlu 770		732 TyrAlaLeuSerGlnTrpIleThrGluAsnGluLysPheAlaGluValGlyValLysAla 751	:::	717 GluSerAlaArgGlyIleIlePheThrLysThrArgGlnSerAla 731	::: :::	697 GluAsnGluLysLeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArgThrGlu 716			903:::::::::::::::::::::::::::::::	657 spGluAspGluAspAspLeuLysLys-ProLeuLysLeuAspGluThrAspArgPheLeu 676	##	637 sPhe-AlaValIleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyA 657	805 TITACTGCGATACGCATCACATACGCGCTCAACATATTCGAGGCCCACGGGGTCACGCCG 864	618 gMetIleAspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLy 637	745 GCTCTGCTCCGCCTTCGCATGGTCGTTCTAAGCGGCAACAGGCGGGCG	598 gValCysAlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleAr 618	685 GAAAGATATGCGGCCTCAAGAGGTGCGGCTATGATCTCGGCTCGAACAGGTCGCTCTCG 744	585 MetGluLysLysAlaAlaLysLys			ce Craclamatear Browet carlanghacludhrala Brodhradhalladha	607 ACCGAAACTGAATGGATAAAGGTGGAGGCTGCCCGGAGATGAAGGAGAGATCCAAAAAGCTC 666	550PheĻysGluLysĻeuLeuGluIleMeṭThrArgIleGlnThrTyr 564	553AGCATAGCACAAAGGACCGAAGACCCGGATGTAAAGCCCCTACGTGCAGGAG 606	538 LysPheAlaIleAlaAspAlaThrArgGluAspPro	499 CTTCCAAGCGAGAGGAGAAAGCCGACGAGATAATGGGCACTCTTCTCTCAAAG 552	518 IleLysThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLys 537	ACC 4		AGAAIGAIGGCAIGACIGCG		478 ValileProLeuProGlnileLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThr 497	451 GCG474	458 MetArgHisTyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysLysGluAsnLysPro 477

US-09-515-363C-2 (1-1025) x US-09-408-020-1 (1-32998)	cal Similarity: 24.0% Mismatches: atch: 5.5% Indels: 3 Gaps:	nment Scores: . No.: . 3.13e-19 . Length: e: 289.50 . Matches: ent Similarity: 39.4% . Conservati	E/KEY: CD ATION: (2 08-020-1	KEY:		54)(2	NAME/KEY: LOCATION: FEATURE:	CDS (13944)	LOCA' NAME	NAME/KEY: LOCATION: FEATURE: NAME/KEY.	Ŋ Ţ	PRIOR FILING DATE: 1998-09-29 NUMBER OF SEQ ID NOS: 123 SOFTWARE: FastSEQ for Windows Vers	: NUCLEI ORP.002/ ORP.002/ NUMBER E: 1999	GENERAL INFORMATION: APPLICANT: Swanson, Ronald V. APPLICANT: Feldman, Robert A. APPLICANT: Schleper, Christa	ESULT 11 S-09-408-020-1 Sequence 1, Appl Patent No. 66329		QY 811 ThrasnGluileAlaMetValGinAlaArgGlyArgAlaArgAlaAspGluselini 029	
Qy	P Q	dg VQ	B Q	g Qy	g Qy	g Qy	B &	β & Ø	Db Qy	d VO	Oy Db	B &	Qу	dg VQ	Ωу	Qy	Qy Db	Qy
637 sPhe-AlaValIleGluAspAspSerAspGluGlyGlyAspAspGluTyrCysAspGlyA 657	618 gMetlleAspAlaTyrThrHisLeuGluThrPheTyrAsnGluGluLysAspLysLy 637 :::::: :::: :::: :::: 19442 TTTACTGCGATACGCATCACATACGCGCTCAACATATTCGAGGCCCACGGGGTCACGCCG 19501	598 gValCysAlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThrIleAr 618 -:::	585 MetGluLy8Ly8AlaAlaLy8Ly8GlyAsnArg-Ly8GluAr 598	565 CysGlnMetSerProMetSerAspPheGlyThrGlnProTyrGluGlnTrpAlaIleGln 584 ::: 19304 CTGAAGATG	550PheLysGluLysLeuLeuGluIleMetThrArgIleGlnThrTyr 564	538 LysPheAlaIleAlaAspAlaThrArgGluAspPro	518 IleLysThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLys 537 ::: ::	498 LysGlnAlaLysAlaGluGluH1sIleLeuLysLeuCysAlaAsnLeuAspAlaFneInF 51/ 19133ACC 19135	VallleProLeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaInr ::::::: :: AGAATGATCGGCATGACTGCG	luAsnLysPro AGAACTCT	438 SerLeuIleIleAspGluCysHisHisThrAsnLysGluAlaValTyrAsnAsnIle 457 ::::: 19028 GGCCTGGTTGTGTTCGACGAGGCCCACAGGGCGGTGGGCGACTATGCCTATTCCGCAATA 19087	418 GluAsnSerLeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValGluLeuSerAspFne 437	PheProGluValValLysSerCysAspIleIleIleSerThrAlaGlnIleLeu	382 LysLysTrpTyrArgVallleGlyLeuSerGlyAspThrGlnLeuLysIleSer 399	362 LeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPheLeu 381 	342 IleAlaLy8A8pHisLeuA8pLy8Ly8Ly8Ly8AlaSerGluProGlyLy8ValIleVal 361 ::: ::: :: 18788 GTGATCTCCCACTATTTGGACGAAGGCAGGGGGGGCTCTCTTCCTTGCGCCGACAAGGGTG 18847	322 GlyLysAsnIleIleCleCysLeuProThrGlySerGlyLysThrArgValAlaValTyr 341	303 GluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeuGlu 321

; TYPE: DNA ; ORGANISM: Cenarchaeum symbiosum ; FEATURE: ; NAME/KEY: CDS ; LOCATION: (1)(1509) US-09-408-020-33 Alignment Scores:	ACERC NO. 0632 ENERAL INFORMA APPLICANT: Swa APPLICANT: Fe APPLICANT: SC TITLE OF INVEN FILE REFERENCE CURRENT APPLICA CURRENT FILING PRIOR APPLICAT PRIOR FILING D NUMBER OF SEQ SOFTWARE: Fast EQ ID NO 33 LENGTH: 1509	b 19862 GTGGGCAGGAGGGCCTCGACATATCGGAGGTAAACCTTGTGGTATTCTATGACAATGTC 19 811 ThrAsnGluIleAlaMetValGlnAlaArgGlyArgAlaArgAlaAspGluSerThr 82 19922 CCAAGCTCGATAAGGTATGTCAGAGAAGGGCAGGACCGGCAGGAAGGA	732 TyrAlaLeuSerGlnTrpIleThrGluAsnGluLysPheAlaGluValGlyValLysAla 751 :::	Db 19502 TTTCTAAAGTTCTGCGAGAGGACCGTCAAGAAAAGGG
Qy 577 ProTyrGluGINTrpAlalleGINMeCGILLLySLYSLYSGLYASHAYGLYS Db 733 AGGTCGCTCTCGGCGCTGCTCCGGCTGCGCATGGTGGTGGTGCTTGGCGGCAACAGGCGC 789 Qy 597 GluArgValCysAlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThr 616 ::: Db 790 GCG	508 GAGAGGGAAAGGCAGACGAGATAATGGGCACCCTGCTCCAAGAGC 5 518 IleLysThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLys 5 518 IleLysThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLys 5 518 IleLysThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLys 5 518 IleLysThrValLysGluAspGCCCTATGTACAGGAGACTGCCACC 6 556 ATAGCCCAGAGGACAGAAGACGACCCGGACGTAAAGCCCCTATGTACAGGAGACTGCCACC 6 538 LysPheAlaIleAlaAspAlaThrArgGluAspProPheLysGluLysLeuLeuGluIle 5 :::::: ::: 616 GAGTGGATAAAGGTGGATCTTCCCCCCGAGATGAAGGAGATACAGAGGCTCCTCAAGCTG 6 558 MetThrArgIleGlnThrTyrCysGlnMetSerProMetSerAspPheGlyThrGln 5 676 GCCCTCGACGAGAGGTATTCCTCCCTCAAGAGGTGCGGGTACGATCTTGGCTCGAAC 7 677 TagTagTagTagTagTCTCCCCTCAAGAGGTGCGGGTACGATCTTGGCTCGAAC 7	438 SerLeuIleIleAspGluCysHisHisThrAsnLysGluAlaValTy		Query Match: 5.3% Indels: 114 DB: 23 US-09-515-363C-2 (1-1025) x US-09-408-020-33 (1-1509) Qy 303 GluProGluLeuGlnLeuArgProTyrGlnMetGluValAlaGlnProAlaLeuGlu 321

```
GENERAL INFORMATION:
APPLICANT: Swanson, Ronald V.
APPLICANT: Feldman, Robert A.
APPLICANT: Feldman, Robert A.
APPLICANT: Schleper, Christa
TITLE OF INVENTION: NUCLEIC ACIDS AND PROTEI
FILE REFERENCE: DCORP.002A
CURRENT APPLICATION NUMBER: US/09/408,020
CURRENT FILING DATE: 1999-09-29
PRIOR APPLICATION NUMBER: 60/102,294
PRIOR FILING DATE: 1998-09-29
                                                                                                                                                                                                                                                                                                                                                                     RESULT
US-09-4
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application Patent No. 6632937
                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
                                       FEATURE:
NAME/KEY:
LOCATION:
                                                                             TYPE: DNA
ORGANISM:
FEATURE:
NAME/KEY:
LOCATION:
FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                 LENGTH:
                                                                                                                                                                ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         753
                                                                                                                                                 42432
                                                                                                                                                                           FastSEQ for Windows
                                                                               (3) ...
                                       CDS
(10625)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAGTATTGATGGCAAAGGGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ThrGluGluSerAlaArgGly------IleIlePheThrLysThrArgGlnSerAlaTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AspGlyAspGluAspGluAspAspLeuLysLysProLeuLysLeuAspGluThrAspArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AspLysLysPheAlaValIleGluAspAspSerAspGluGlyGlyAspAspGluTyrCys
             SdD
                                                                                                                       Cenarchaeum
                                                                                                                                                                                                                                                                                                                                                                                                                                       ValLeuValAlaHisSerGlySer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCTCGATCAGGTACGTGCAGAGGAGGAGGGGGGAGAACAGGCAGAAAGGACGCCGGCAGGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGGAGACTGTGGCAAAGTTCCGTGACGGCGGGTACGACGTGCTGGTATCGACGAGGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LysGluValIleSerLysPheArgThrGlyLysIleAsnLeuLeuIleAlaThrThrVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATCCTGATAGGAAAGGCGGGAGAA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HisLeuIleGly---AlaGlyHisSerSerGluPheLysProMetThrGlnAsnGluGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCATA--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaLeuSerGlnTrpIleThrGluAsnGluLysPheAlaGluValGlyValLysAlaHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCATGGÁGCATCCCÁAGATACCAÁAGCTCGAGGATGCCGTC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluTyrGluAsnGluLysLeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PheLeuMetThrLeuPhePheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AsnGluIleAlaMetValGlnAlaArgGlyArg---AlaArgAlaAspGluSerThrTyr
 (11478)...(13046)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ·CGCGGGGCCCGGGAAAGGCGCTGGTCTTTACGAGCTATCGTGATTCTGTCGAC
                                                                               (10421)
                                                                                                                      symbiosum
                                                                                                                                                                                                                                                                                                                                                        US/09408020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  - AACTTTACAGGGGCCATCGCGCGCGCAAAGGCCGCGCAGGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----CACTCAAGACTCAAGGCGGCCGGGATAAACTCGGGC
                                                                                                                                                                            Version
                                                                                                                                                                                                                                                                                                                                                                                                              1371
                                                                                                                                                                                                                                                                                                                                                                                                                                       838
                                                                                                                                                                                                                                                                         PROTEINS
                                                                                                                                                                                                                                                                         FROM CENARCHAEUM SYMBIOSUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -AAGGGCCTAAAGCAGAGAAAACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGTTCGAACAGGACCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; FEATURE:
; NAME/KEY: CDS
; LOCATION: (39454).
US-09-408-020-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment & Pred. No.:
                                                               Ş
                                                                                              멂
                                                                                                                      Ś
                                                                                                                                                  밁
                                                                                                                                                                           á
                                                                                                                                                                                                         밁
                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                 Ъ
                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -09-515-363C-2 (1-1025) x US-09-408-020-2 (1-42432)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
NAME/KEY:
LOCATION:
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION:
FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURE:
NAME/KEY:
LOCATION:
FEATURE:
NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE: NAME/KEY:
                                                                                                                                                  34847
                                                                                                                                                                                                                                                                                                                 34709
                                                                                                                                                                                                                                                                                                                                                                                                                             34592
                                                                                                                                                                              400
                                                                                                                                                                                                                                                                                                                                            342
                                                                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scores:
                                                                                                                                                                                                                                                                                                                                                                                        GlyLysAsnIleIleIleCysLeuProThrGlySerGlyLysThrArgValAlaValTyr 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
(37404)...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
(37002)...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS (34559)...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
(29655)...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
(26504)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
(24913)...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
(13046)...
                                                                                                                                                                                                                                                                                                                 GTGATCGCCCACTATCTCGACGAGGGCCGCGGGGGCGCTCTTCCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GluPro---GluLeuGlnLeuArgProTyrGlnMetGluValAlaG
             MetArgHisTyrLeuMetGlnLysLeuLysAsnAsnArgLeuLysL
                                                                                              AGAAATGATATA--
                                                                                                                        GluAsnSerLeuLeuAsnLeuGluAsnGlyGluAspAlaGlyValG
                                                                                                                                                                                                                      LysLysTrpTyrArgValIleGlyLeuSerGlyAspThrGlnLeu--
                                                                                                                                                                                                                                                                              LeuValAsnLysValLeuLeuValGluGlnLeuPheArgLysGluPheGlnProPheLeu 381
                                                                                                                                                                                                                                                                                                                                 --- GAGAACTGTATCGTGGTGCTCCCGACGGGCCTCGGCAAGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                           GAGCCCGGTGCCGTCGAGAGGCGCGACTACCAGGTGGGCCTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
(23558)
                                                                                                                                                    ATTCCCCGGCGCAAAAAGGCGTGGGGGAGGCAGCGTGATCTGCGCCA
                                                                  SerLeulleileAspGluCysHisHisThrAsnLysGluAlaV
                                                                                                                                                                             PheProGluValValLysSerCys--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.97e-18
284.00
41.4%
24.3%
5.3%
                                                                                                                                                                                                         --- AGGCCCTTACCATATCCGATATTACACTGGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (36067)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (30491)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (25728)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (14620)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (38282)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (37403)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (40572)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (26881)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (24862)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
Gaps:
                                                                                                                                                                              -AspileileileSerT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           42432
133
94
207
114
23
                                                                                                                                                                                                                                                            CAGCACCGCCAGTTCCTG 34795
                ysGluAsnLysPro 477
                                           |||::::::|||
CCTATTCTTCCATA 35008
                                                                  alTyrAsnAsnIle 457
                                                                                              CGCTCGAACAGTTC 34948
                                                                                                                       lnLeuSerAspPhe 437
                                                                                                                                                                             hrAlaGlnIleLeu 417
                                                                                                                                                                                                        :::
CGGGAGAGGACACC 34846
                                                                                                                                                                                                                              ----LysileSer 399
                                                                                                                                                                                                                                                                                                                 CCCCTACAAGGGTC 34768
                                                                                                                                                                                                                                                                                                                                           lyLysValIleVal 361
                                                                                                                                                                                                                                                                                                                                                                      ||||||:::
CCGTCGCCCTCCAG 34708
                                                                                                                                                                                                                                                                                                                                                                                                                           :: |||:::
AACAGGCCATACGG 34651
                                                                                                                                                                                                                                                                                                                                                                                                                                                      lnProAlaLeuGlu 321
                                                                                                                                                    GCCCGAGÁTAGCA 34906
```

```
35450
                                                                                                                                                                                                                                                            HisLeuIleGly---AlaGlyHisSerSerGluPheLysProMetThrGlnAsnGluGln
                                                                                                                                                    GTGGAGACTGTGGCAAAGTTCCGTGACGGCGGGTACGACGTGCTGGTATCGACGAGGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AlaGluGluGlyLeuAspIleLysGluCysAsnIleValIleArgTyrGlyLeuValThr
                                                                                                                                                                                        LysGluValIleSerLysPheArgThrGlyLysIleAsnLeuLeuIleAlaThrThrVal
                                                                                                                                                                                                                                    ATCCTGATAGGAAAGGCGGGAGAA-
                                                                                                                                                                                                                                                                                                                CTCATA--
                                                                                                                                                                                                                                                                                                                                                 AlaLeuSerGlnTrpIleThrGluAsnGluLysPheAlaGluValGlyValLysAlaHis
                                                                                                                                                                                                                                                                                                                                                                                        GGCATGGAGCATCCCAAGATACCAAAGCTCGAGGATGCCGTC--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GluTyrGluAsnGluLysLeuThrLysLeuArgAsnThrIleMetGluGlnTyrThrArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGAAAAGGGCGTCGGCGTGGCGGAG----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AspLysLysPheAlaValIleGluAspAspSerAspGluGlyGlyAspAspGluTyrCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTAAACATATTCGAGGCGCACGGGGTCACGCCCTTTCTAAAGTTCTGCGAGAGGACCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IleArgMetIleAspAlaTyr-----ThrHisLeuGluThrPheTyrAsnGluGluLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GluArgValCysAlaGluHisLeuArgLysTyrAsnGluAlaLeuGlnIleAsnAspThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGTCGCTCTCGGCGCTGCTCCGGCTG---CGCATGGTGGTGCTTGGCGGCAACAGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProTyrGluGlnTrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsnArgLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCTCGAC---GAGAGGTÀTTCCTCCCTCAAGAGGTGCGGGTACGÀTCTTGGCTCGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATAGCCCAGAGGACAGAAGACGACCCGGACGTAAAGCCCCTATGTACAGGAGACTGCCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAGAGGGAGAAGGCAGACGAG------ATAATGGGCACCCTGCTCTCCAGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTAGGGGATAACTCCAGGATGGTGGGCATGACTGCGACGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ValIleProLeuProGlnIleLeuGlyLeuThrAlaSerProGlyValGlyGlyAlaThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ececee--
 AGCTCGATCAGGTACGTGCAGAGGAGGGGGGGGAGAACAGGCAGAAAGGACGCCGGCAGGCTG 35905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PheLeuMetThrLeuPhePheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AspGlyAspGluAspGluAspAspLeuLysLysProLeuLysLeuAspGluThrAspArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MetThrArgIleGlnThrTyrCysGlnMetSerProMetSer---AspPheGlyThrGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LysGlnAlaLysAlaGluGluHisIleLeuLysLeuCysAlaAsnLeuAspAlaPheThr
                                     AsnGluIleAlaMetValGlnAlaArgGlyArg---AlaArgAlaAspGluSerThrTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IleLysThrValLysGluAsnLeuAspGlnLeuLysAsnGlnIleGlnGluProCysLys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -------AACTTTACAGGGGCCATCGCGCGCAAAGGCCGCGCAGGCGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ------GCCAAGCCGCTGTTCACTGCGATACGCATAACGTACGCG
                                                                           - CACTCAAGACTCAAGGCGGCCGGGATAAACTCGGGC
                                                                                                                                                                                                                                    ÄÄĠGGCCTAAAGĊÄĠAGAAAAĊÄĠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTTCGAACAGGACCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----GCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; TYPE: DNA
; ORGANISM: Homo
US-10-104-047-1641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 14
US-10-104-047-1641
                                                       엉
                                                                                         Ϋ́
                                                                                                                                   뮍
                                                                                                                                                                ঠ
                                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-515-363C-2 (1-1025) x US-10-104-047-1641 (1-2354)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                       멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Sequence 1641, Application
; Patent No. 6943241
; GENERAL INFORMATION:
; APPLICANT: HELIX RESEARCH
; TITLE OF INVENTION: No. 69
; FILE REFERENCE: H1-A0105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 1641
LENGTH: 2354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/104,047 CURRENT FILING DATE: 2002-03-25 PRIOR APPLICATION NUMBER: PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS:
SOFTWARE: PatentIn Ve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . No.:
                                                                                                                                                                                                                                                                                                                                                                                                            292
                                                                                                                                                                                                                                                                                                                                                                                                                                                     168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            66
                                                                                                                                                                                                                                                                                                                                  LeuGln--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGAAGCCTTCGGTGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ValLeuValAlaHisSerGlySer
                        Val---
                                                            ATGTACAATTTCTAC-
                                                                                                                                                                LysAsnIleIleCysLeuProThrGlySerGlyLysThrArgVa
                                                                                                                                                                                                                                                                                                                                                                       GCGGAGGCTCAGCTGGAGTCGGACGATGATGTGTTGCTTGTCGCGGCGTACGAGGCTGAG 287
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGCTCCGGAACTGAGCGACCTCAGAGCCCTGGCAGCTCCAAGGCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AspSer--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGGAAACCGATGGGGATCGGAACCGTAGCGGTTGAGCTGCTGCTG
                                                                                            AlaLysAspHisLeuAspLysLysLysLysAlaSerGluProGlyL
                                                                                                                                      TGCAATACGCTGGTGTGTCTGCCTACCGGACTGGGAAAGACCTTTA
                                                                                                                                                                                                               CCTACCAATTGCCCAGTGCGGGACTACCAGCTGCACATTTCCCGGGCTGCTCTG---TTT 404
                                                                                                                                                                                                                                                                                             CGGCAGTTCTGTCTAGAGAATGGCGGGTTCTGCACCTCCGCGGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTTTCAGACGTGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LeuAspGluSerLeuGlyHisAsnSerAsnMetGlySerAspSerG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LysGluValTrpGlyMetGluAsnAsnSerSerGluSerSerPheA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----SerValValSerGluSerAspThrSerLeuAlaGluG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
-AsnLysValLeuLeuValGluGlnLeuPheArgLysGluP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESEARCH INSTITUTE
NN: No. 6943241el full
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.51e-20
283.50
35.2%
20.7%
5.3%
                                                                                                                                                                                                                                                   -LeuArgProTyrGlnMetGluValAlaGlnP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US/10104047
                                                                                                                                                                                                                                                                                                                                                                                                          -AspGluGluAsnValAlaAlaArgAlaS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----TCAAGTATCTCCCGATCATCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                            CGCTGGTTCCCTTCAGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCGGCCTAATGAGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                        TTGCCGCCGTGGTC 464
                                                                                                                                                                                                                                             roAlaLeuGluGly 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTACGGATATCTGA 65
                        heGlnProPheLeu 381
                                                                                                                                                                                                                                                                                             CCCTGTGGATTTAC 347
                                                                                                                                                                                                                                                                                                                                                                                                             erProGluProGlu 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTGCCAGCAGCA 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       laAspSer---- 252
                                                                                                                                                                      lAlavalTyrIle 342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ySerValSerCys 269
                                                         sVallleValLeu 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GACTCCGGGTTGC 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACGGCAAAGAACG 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   γThrMetGlγSer 289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---- 291
                                                                                                                                                                                                                                                                                                                                  ---- 307
```

β δ B 8

밁 á 망 ठ 밁 र् 멍 ঠ 밁 S 밁 Ś В á 밁 Ś

8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8

유

B Q B Q B Q	D Q D Q	8 8 8 8 8 8 8	8 8 8 8 8 8 8	2 2 2 2 2 2 2 2 2 2
spAlaTy	557 IleMetThrArgIleGlnThrTyrCysGlnMetSerProMetSerAspPheGly 5 :::::: 183 GTATTAGTTTATATCATGGTTATGAATTATTGCAGCAAATGGGAATGAGATCATTATATT 1 575 ThrGlnProTyrGluGlnTrpAlaIleGlnMetGluLysLysAlaAlaLysLysGlyAsn 5 :::	507 LeuLysLeuCysAlaAsnLeuAspAla 515 ::: ::: 963 GTTCCGCTTGGTGAAGAACTTGCAGCCATCCAAAAGACCTATATCCAGATTTTGGAATCA 1022 516 PheThrIleLysThrValLysGluAsnLeu	TATTGCCAGGTTGTAAGAGAACTAGTCAAATATACAAATCACTTT	13 14 14 14 14 14 14
UMBER OF SEQUENCES: 16 ORRESPONDENCE ADDRESS: ADDRESSEE: John P. White, c/o Cooper & Dunham STREET: 30 Rockefeller Plaza CITY: New York STATE: New York COUNTRY: U.S.A. ZIP: 10112 OMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible	Qy 903 Ile 903 ::: Db 1977 GTT 1979 RESULT 15 US-08-143-576-6 ; Sequence 6, Application US/08143576 ; Patent No. 5643761 ; GENERAL INFORMATION: ; APPLICANT: Fisher, Paul B. ; APPLICANT: Jiang, Hongping ; TITLE OF INVENTION: METHOD FOR GENERATING A SUBSTRACTED ; TITLE OF INVENTION: CONA LIBRARY AND USES OF THE GENERATED LIBRARY	Db 1824 GGCCGTAAACGTCAAGGCAGGATAGTTATTCTTGAAGGA 1868 Qy 843 HisGluThrValAsnAspPheArgGluLysMetMetTyrLysAlaIleHisCysValGln 862	ב אַ ב אַ—בּ סָ—בּ א	Qy 675 PheLeuMetThrLeuPhePheGluAsnAsnLysMetLeuLysArgLeuAlaGluAsnPro 694 1407

```
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/143,576
FILING DATE: 25-OCT-1993
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: White, John P.
REGISTRATION NUMBER: 28,678
REFERENCE/DOCKET NUMBER: 43563/JPW/AKC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 977-9550
TELEX: 422523 COOP UI
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 193 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
US-08-143-576-6
                                                                                                                                                                         멍
                                                                                                                                                                                                      8
Search completed: March 12, 2006, 06:36:44 Job time: 5367 secs
                                                                                    გ
                                                                                                                   밁
                                                                                                                                           S
                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores: Pred. No.:
                                                           밁
                                                                                                                                                                                                                                                                                              US-09-515-363C-2 (1-1025) x US-08-143-576-6 (1-193)
                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                       1007
                                                                                                                    120
                                                                                                                                               987
                                                                                                                                                                                                          967
                                                                                                                                                                                                                                                                    947
                                                          159 GTAGATACTATCACATTCACTGACTAT 185
                                                                                                                                                                             60
                                                                                   ProIleThrPheProAsnLeuAspTyr 1015
                                                                                                                  CTGCAAAAGAAGTGTGCCGACTATAA-ATAAATGGTGAAATCATCTGCAAATGTGGCCAG
                                                                                                                                                                                                                                                      LeuGlnLysLysCysAlaAspTyrGlnIleAsnGlyGluIleIleCysLysCysGlyGln
                                                                                                                                                                                               AlaTrpGlyThrMetMetValHisLysGlyLeuAspLeuProCysLeuLysIleArgAsn
                                                                                                                                                                             GCTTGGGGAACAATGATGGTGCACAAAGGCTTAGATTTGCCTTGTCTCAAAATAAGGAAT
                                                                                                                                                                                                                                                                                                                             3.28e-16
227.50
75.4%
72.5%
4.3%
                                                                                                                                                                                                                                                                                                                           Conservative: Mismatches: Indels: Gaps:
                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                           193
50
2
10
8
                                                                                                                                                                                                         986
                                                                                                                                                                             119
                                                                                                                                                                                                                                                                  966
                                                                                                                                                                                                                                       59
```

This Page Blank (USPto)